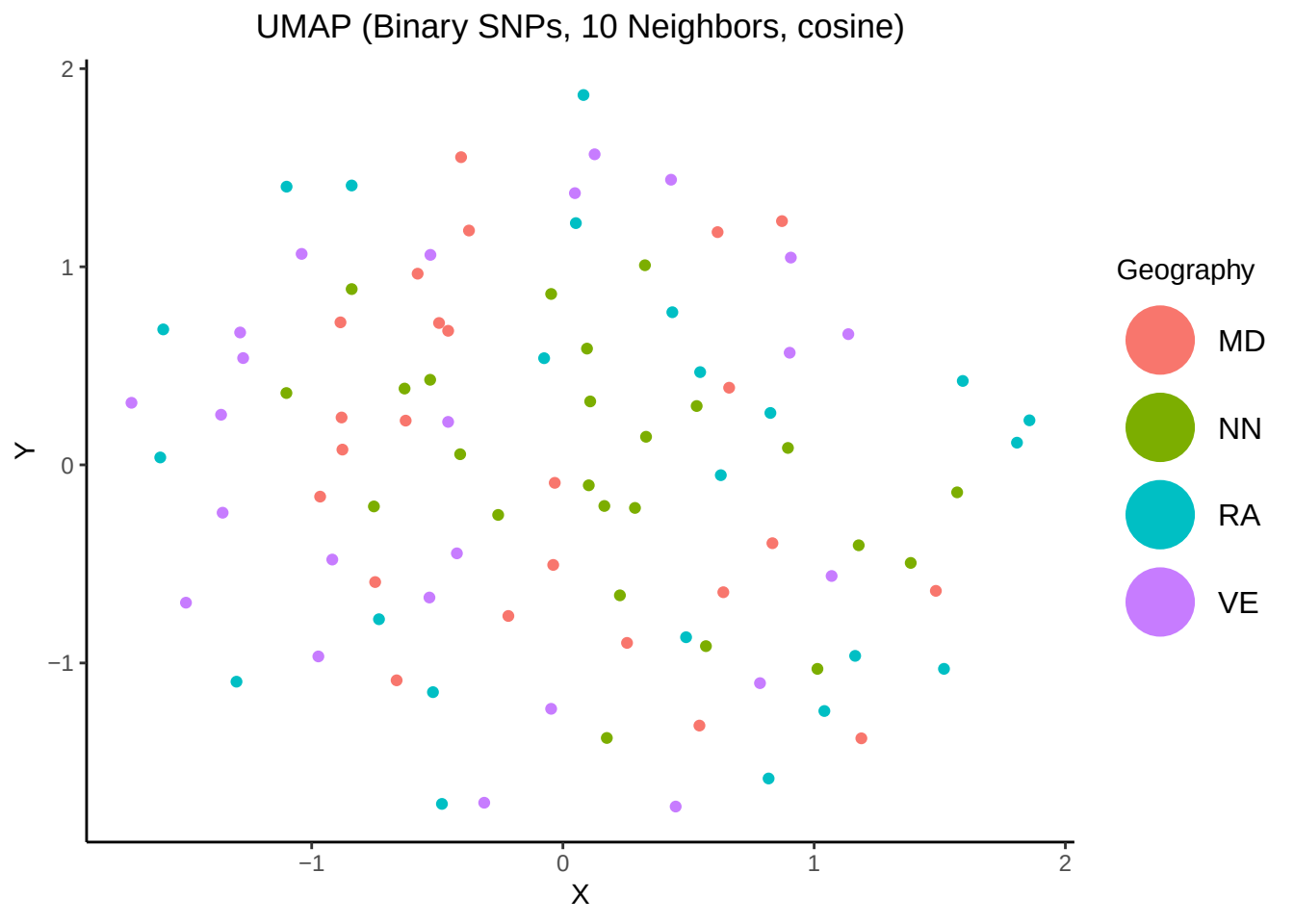
UMAP (Binary SNPs, 10 Neighbors, cosine)
Y
X
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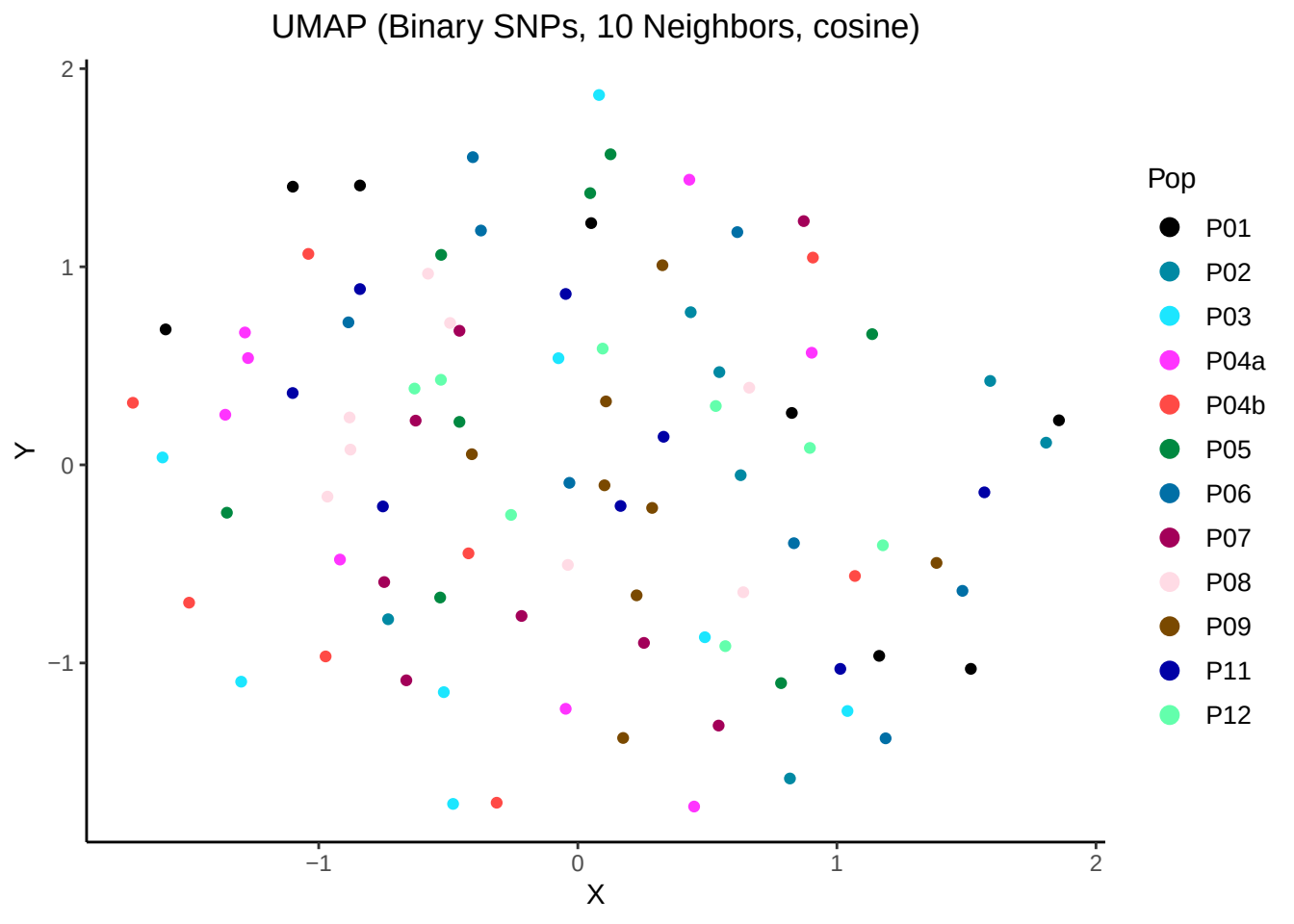
1
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 10 Neighbors, cosine)
Y
X
2
1
0
−1
−1
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Pop
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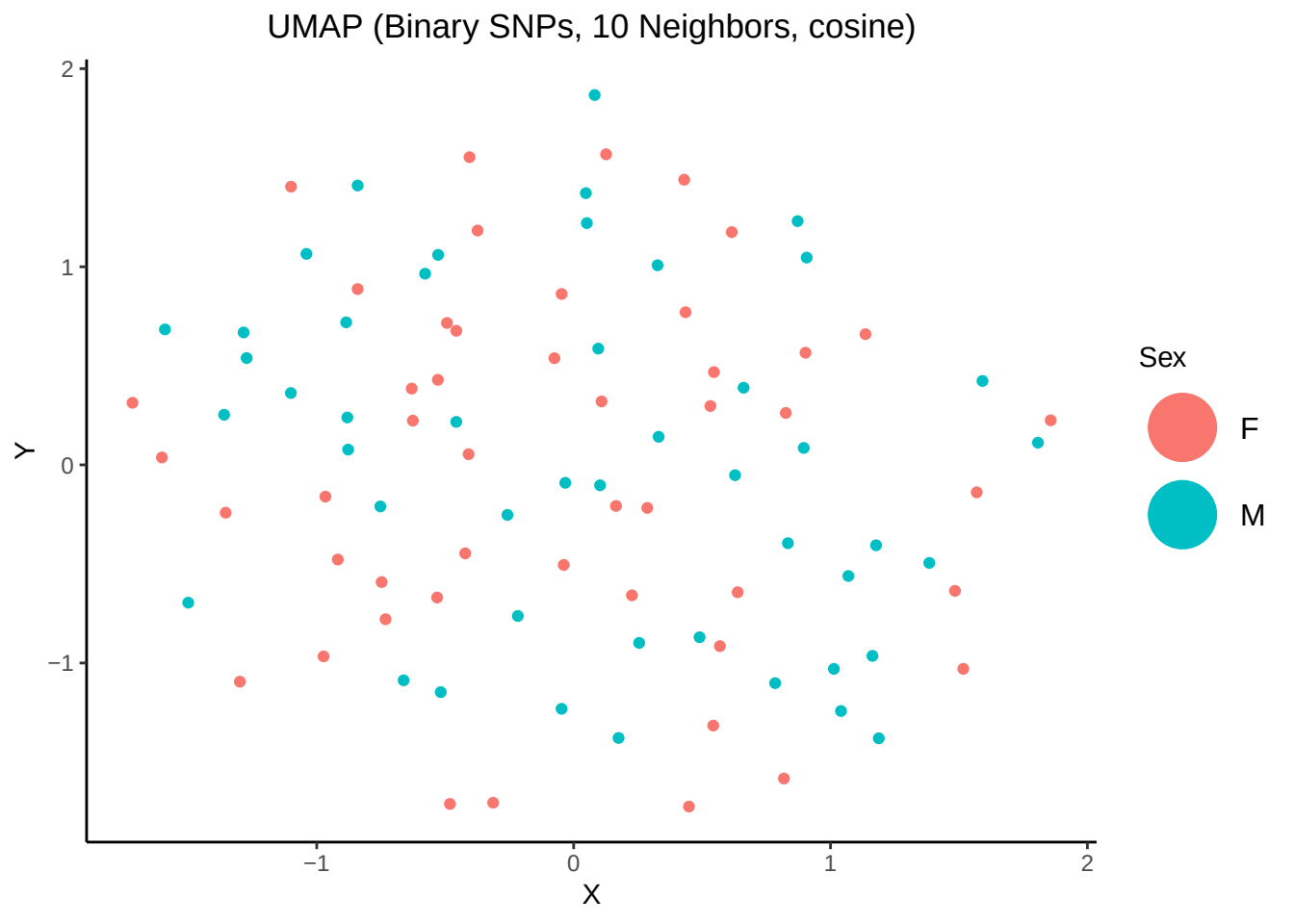
UMAP (Binary SNPs, 10 Neighbors, cosine)
Y
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Sex
F
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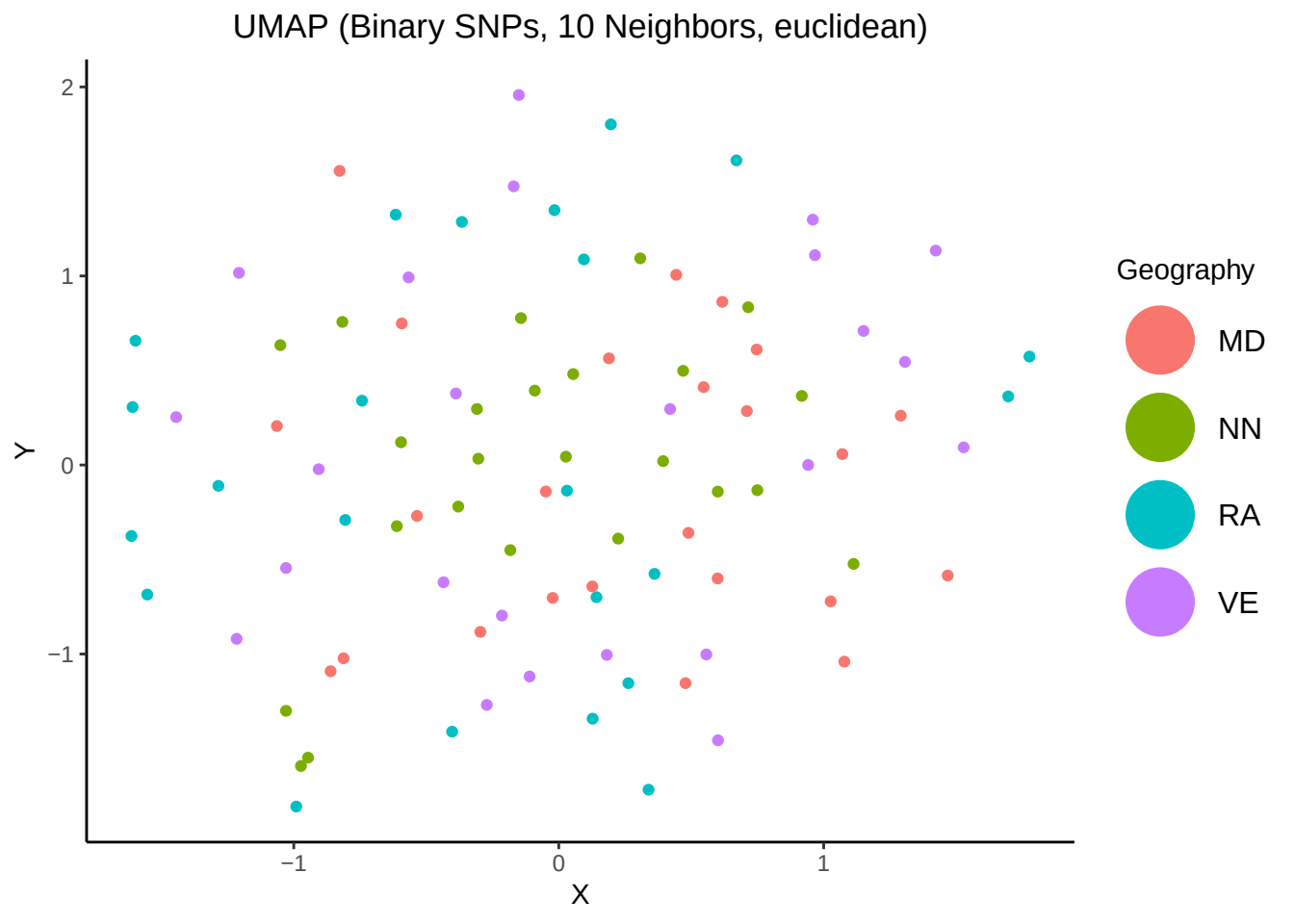
UMAP (Binary SNPs, 10 Neighbors, euclidean)
Y
X
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0
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−1
0
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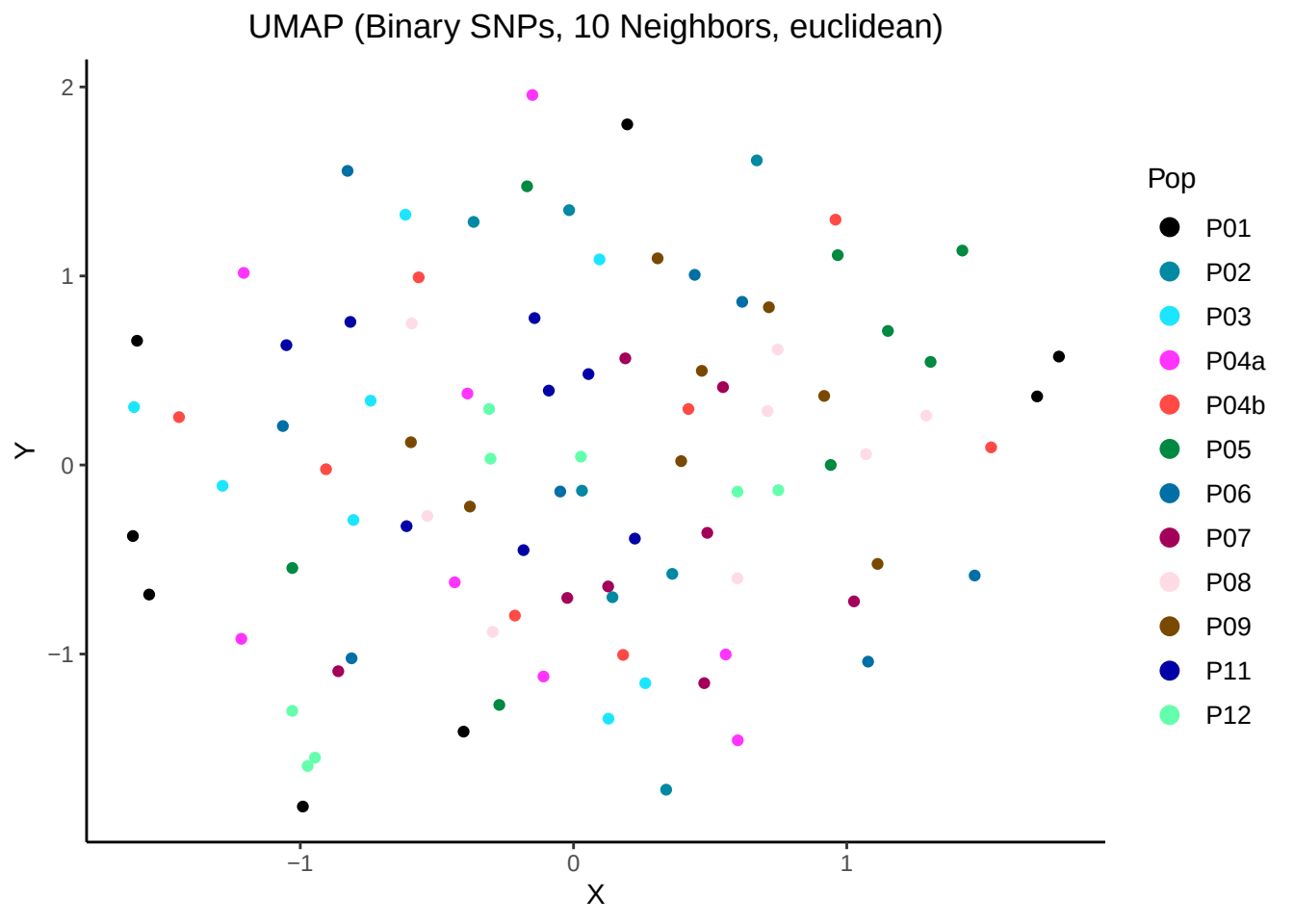
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 10 Neighbors, euclidean)
Y
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Pop
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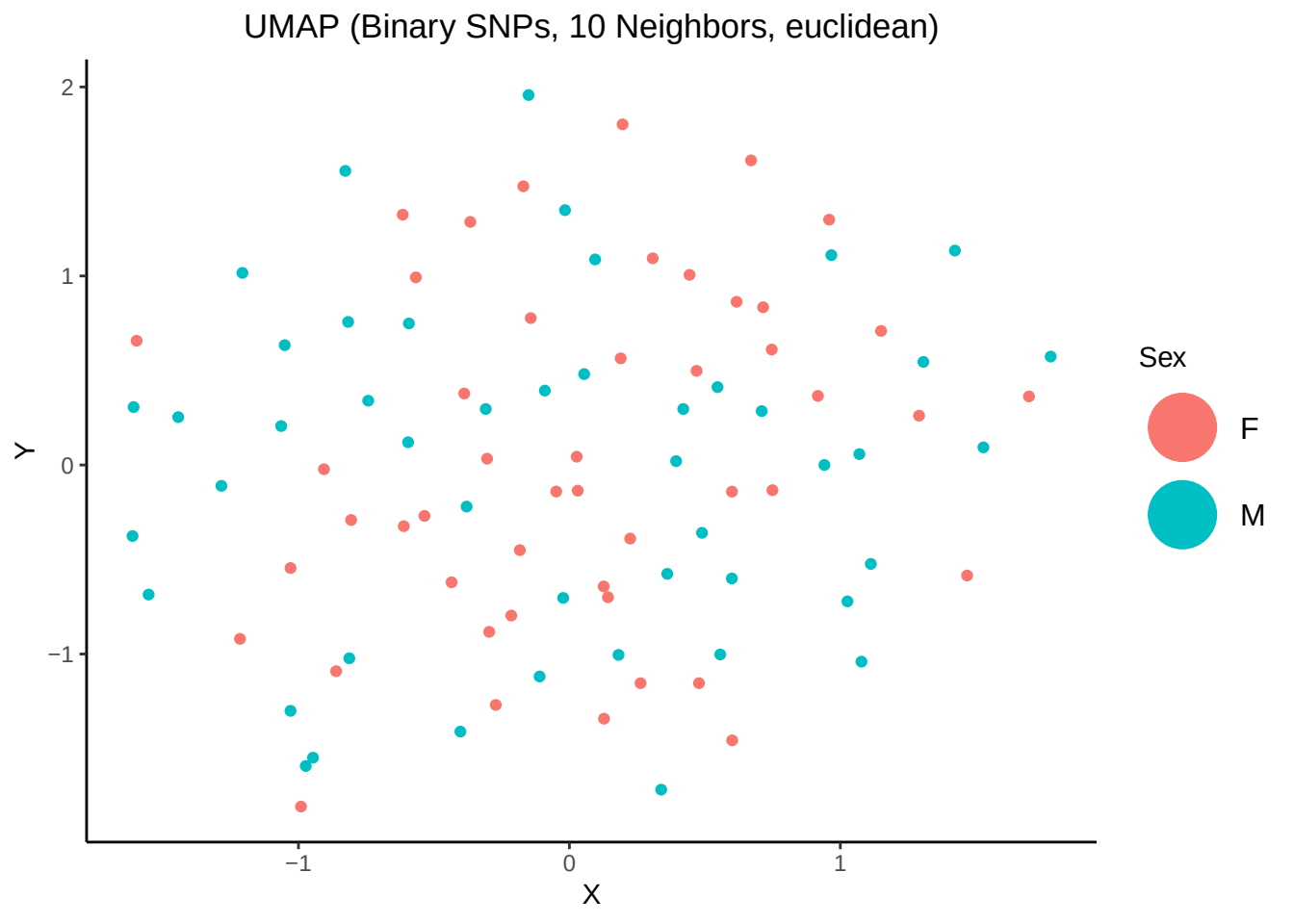
UMAP (Binary SNPs, 10 Neighbors, euclidean)
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Sex
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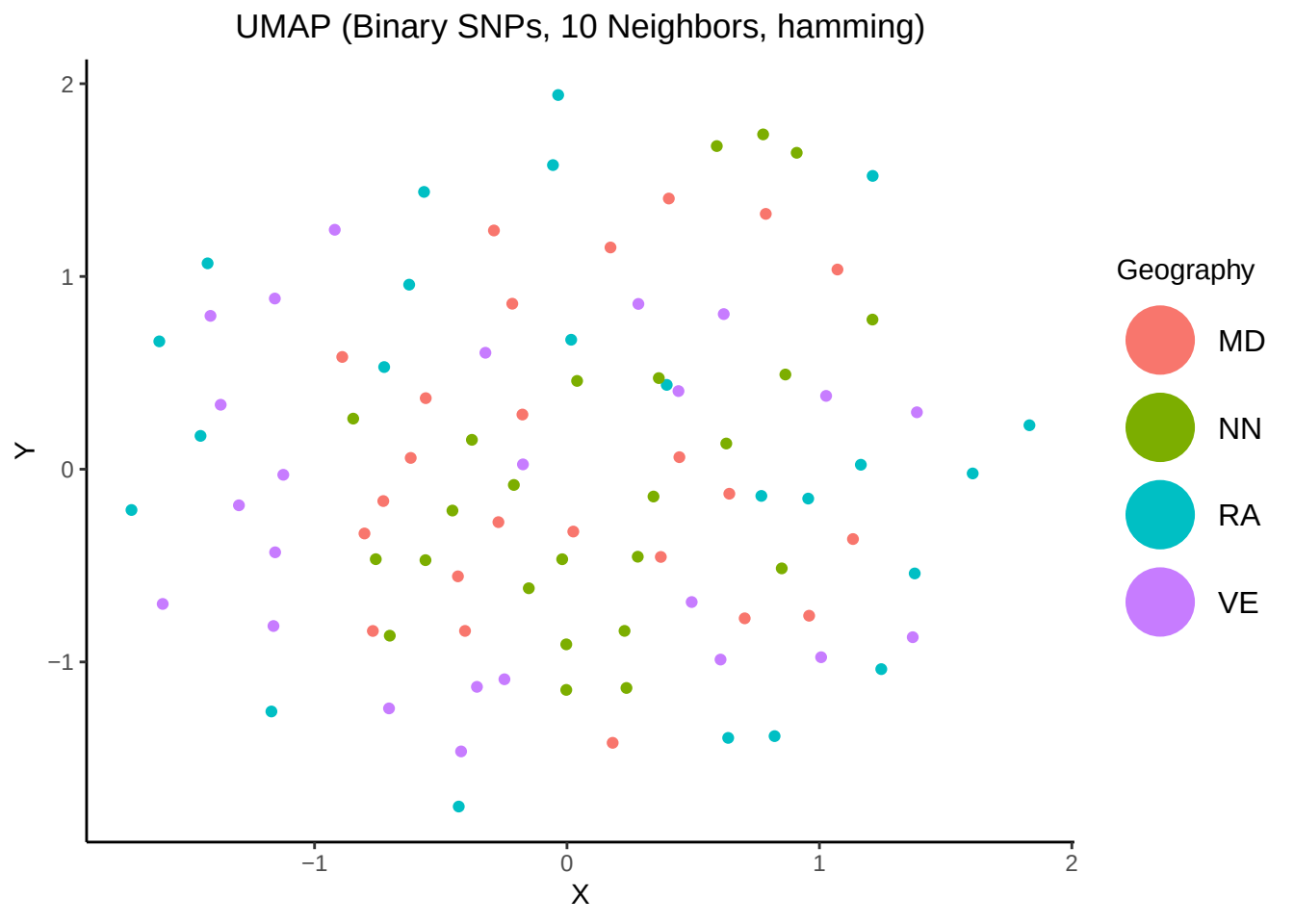
UMAP (Binary SNPs, 10 Neighbors, hamming)
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X
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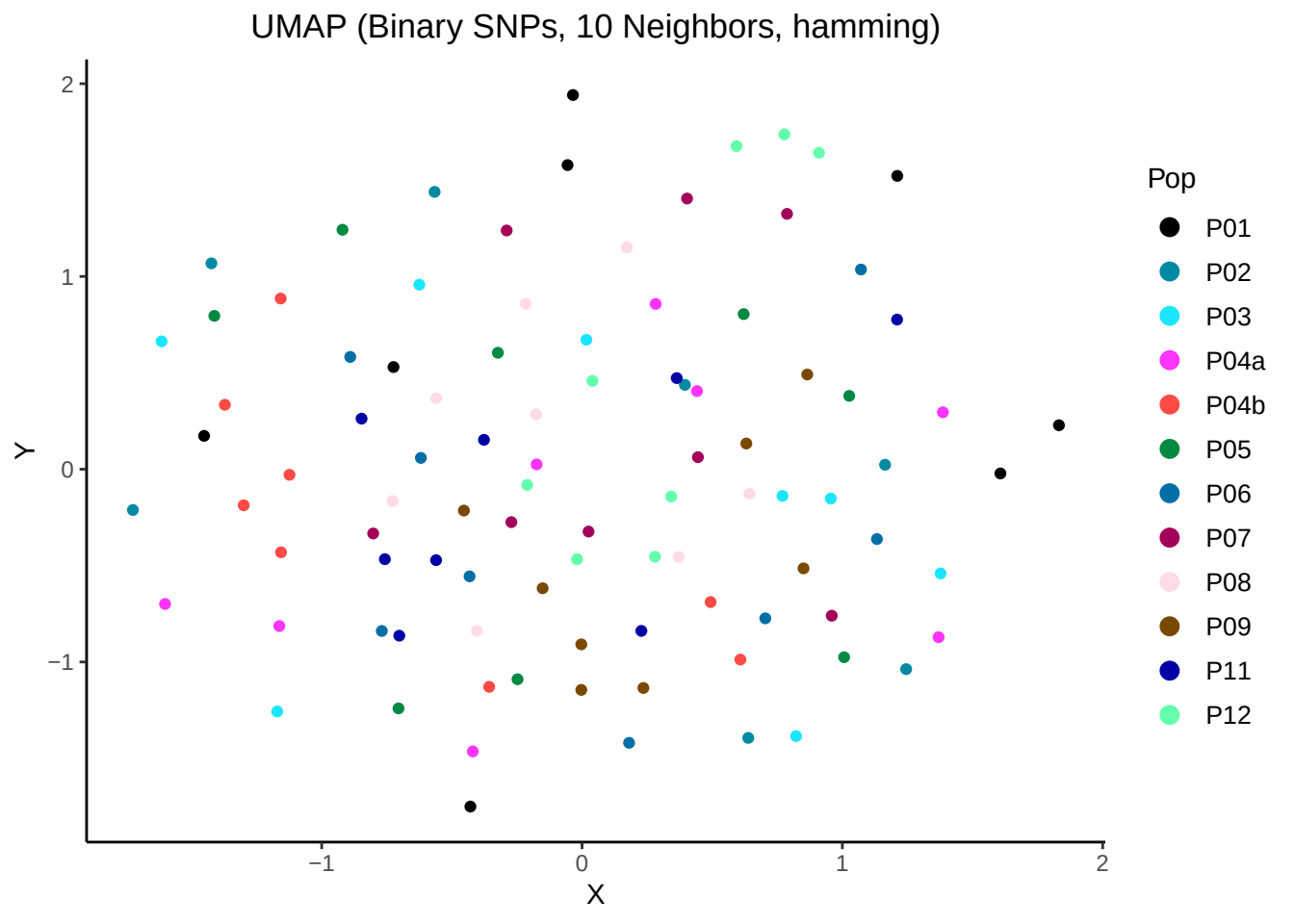
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 10 Neighbors, hamming)
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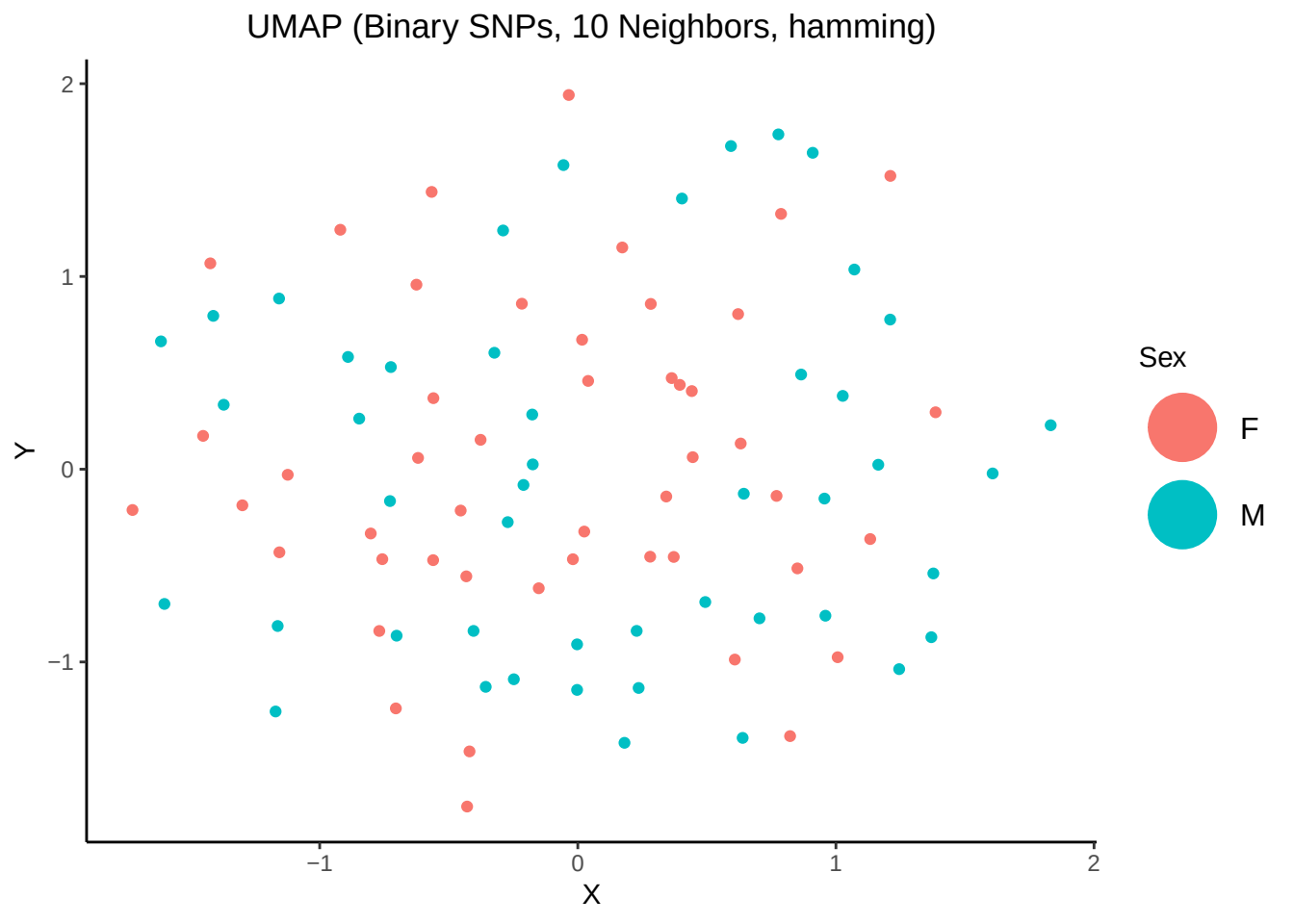
UMAP (Binary SNPs, 10 Neighbors, hamming)
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Sex
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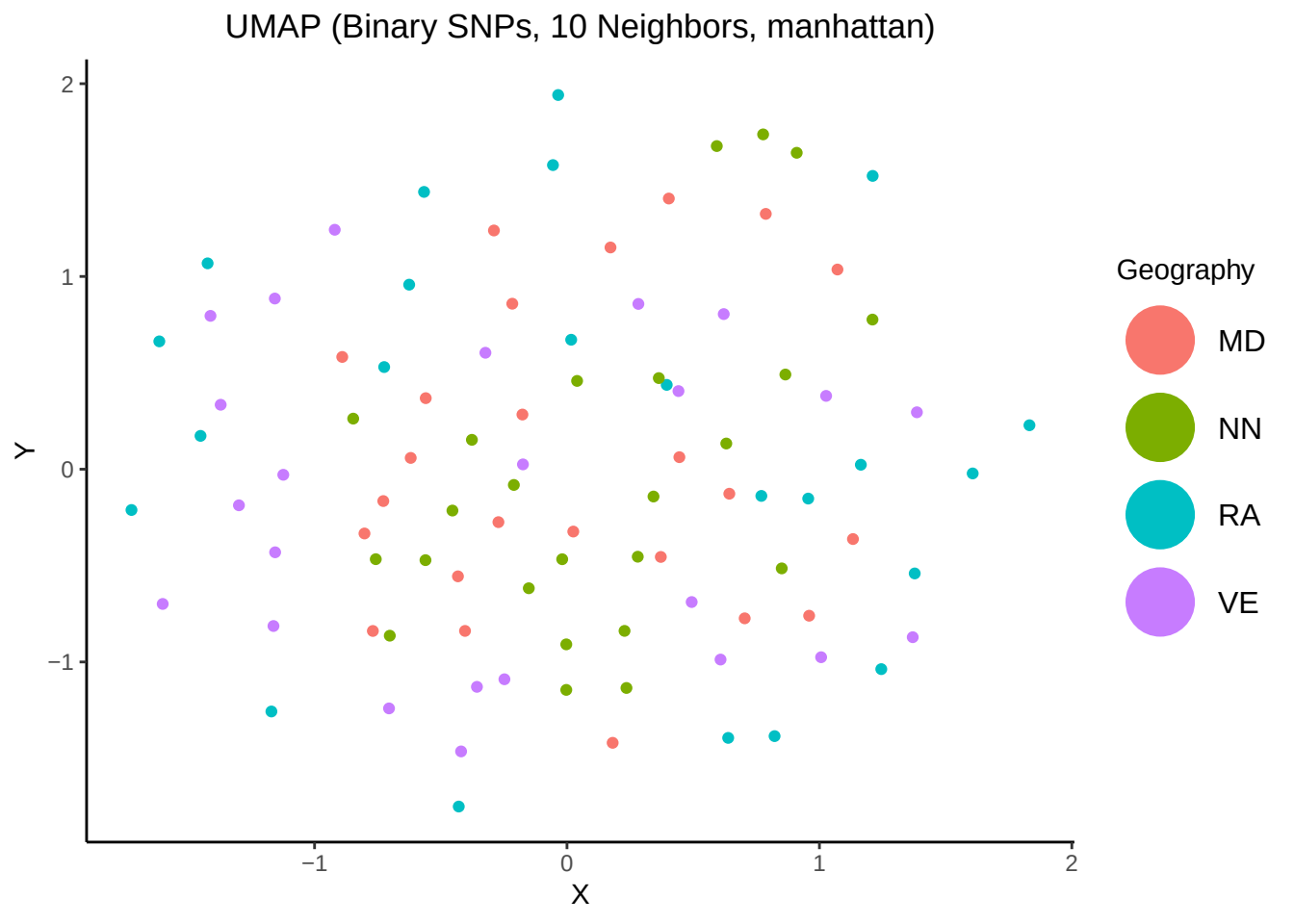
UMAP (Binary SNPs, 10 Neighbors, manhattan)
Y
X
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Geography
MD
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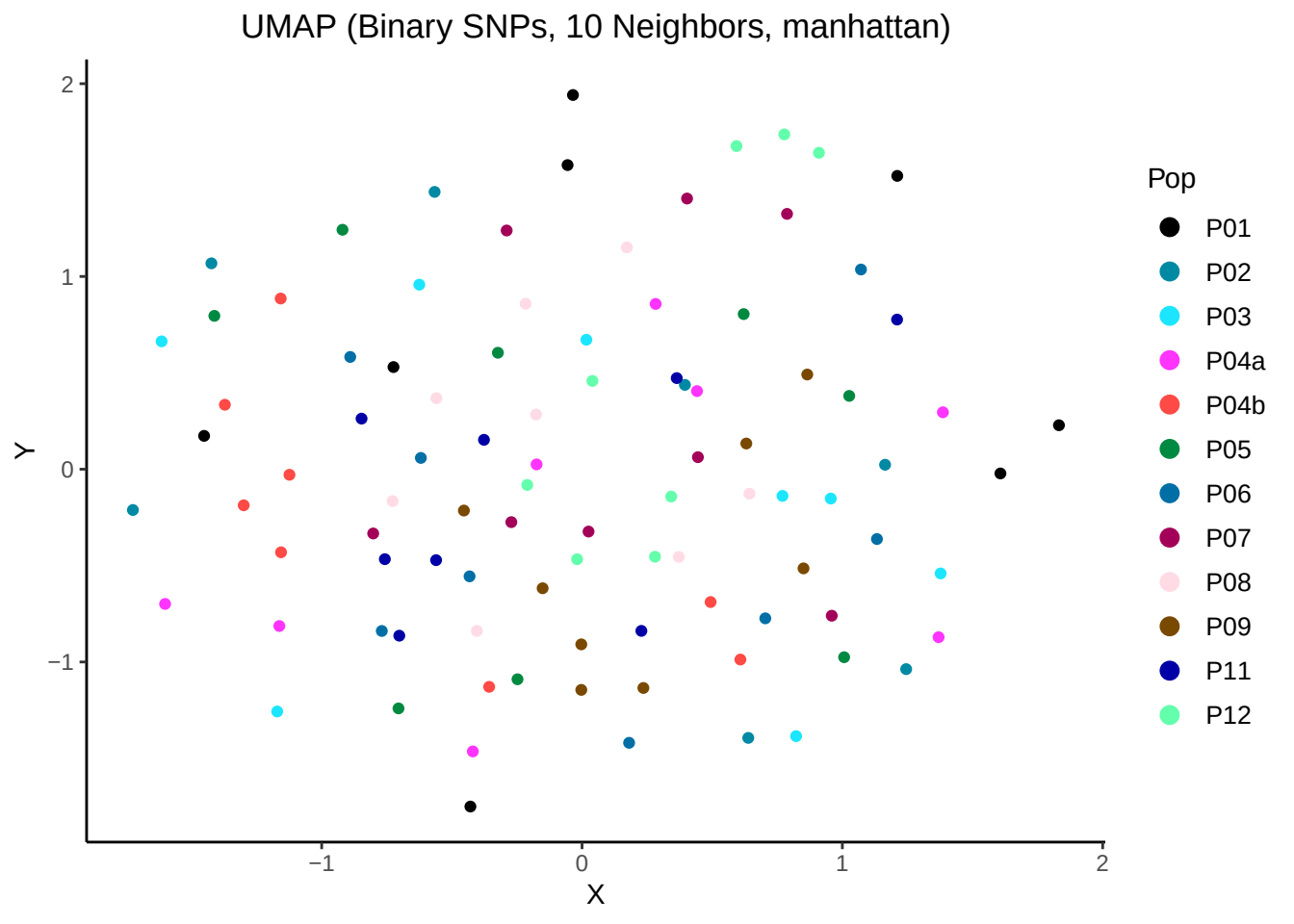
RA
VE


UMAP (Binary SNPs, 10 Neighbors, manhattan)
Y
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Pop
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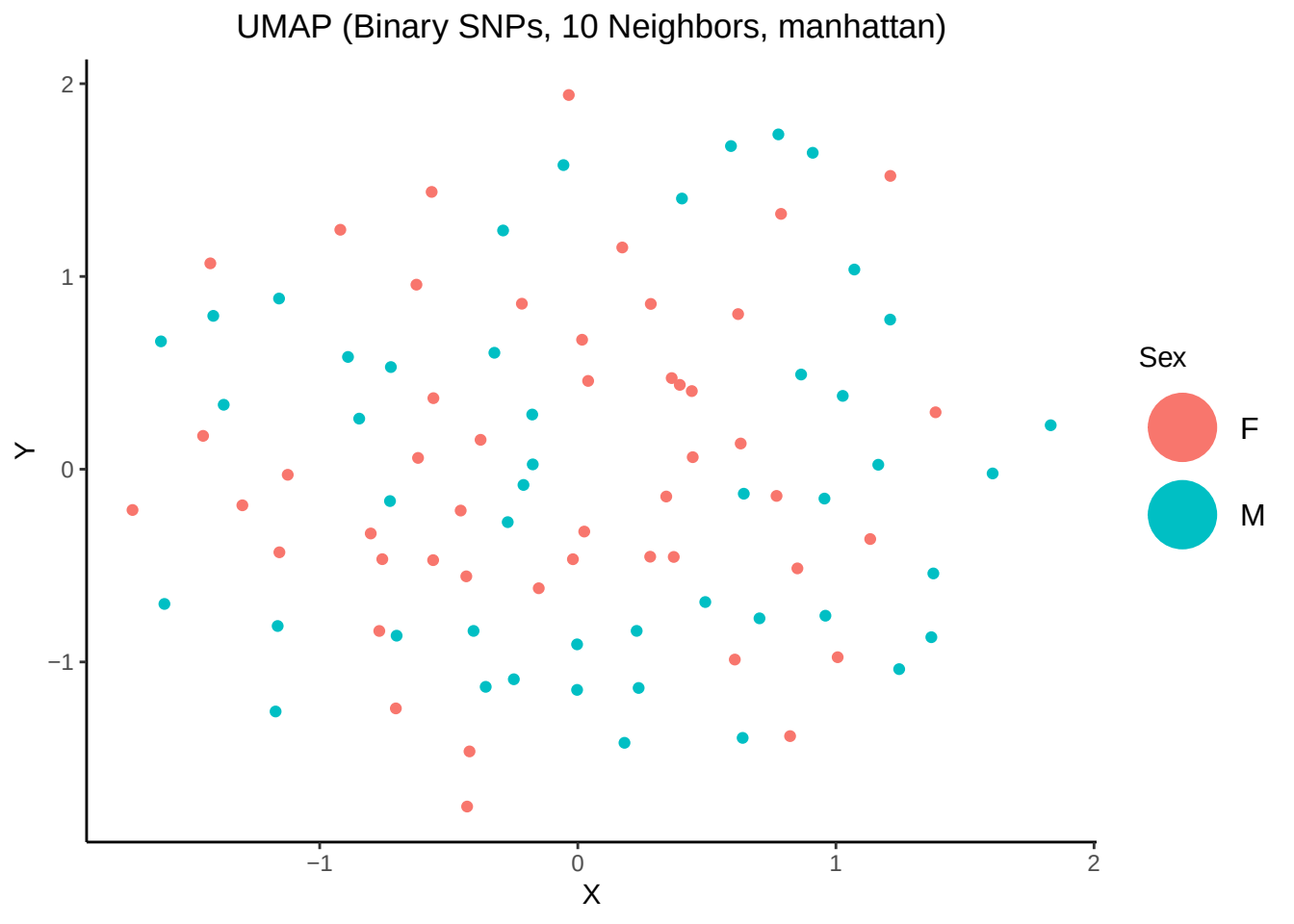
UMAP (Binary SNPs, 10 Neighbors, manhattan)
Y
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Sex
F
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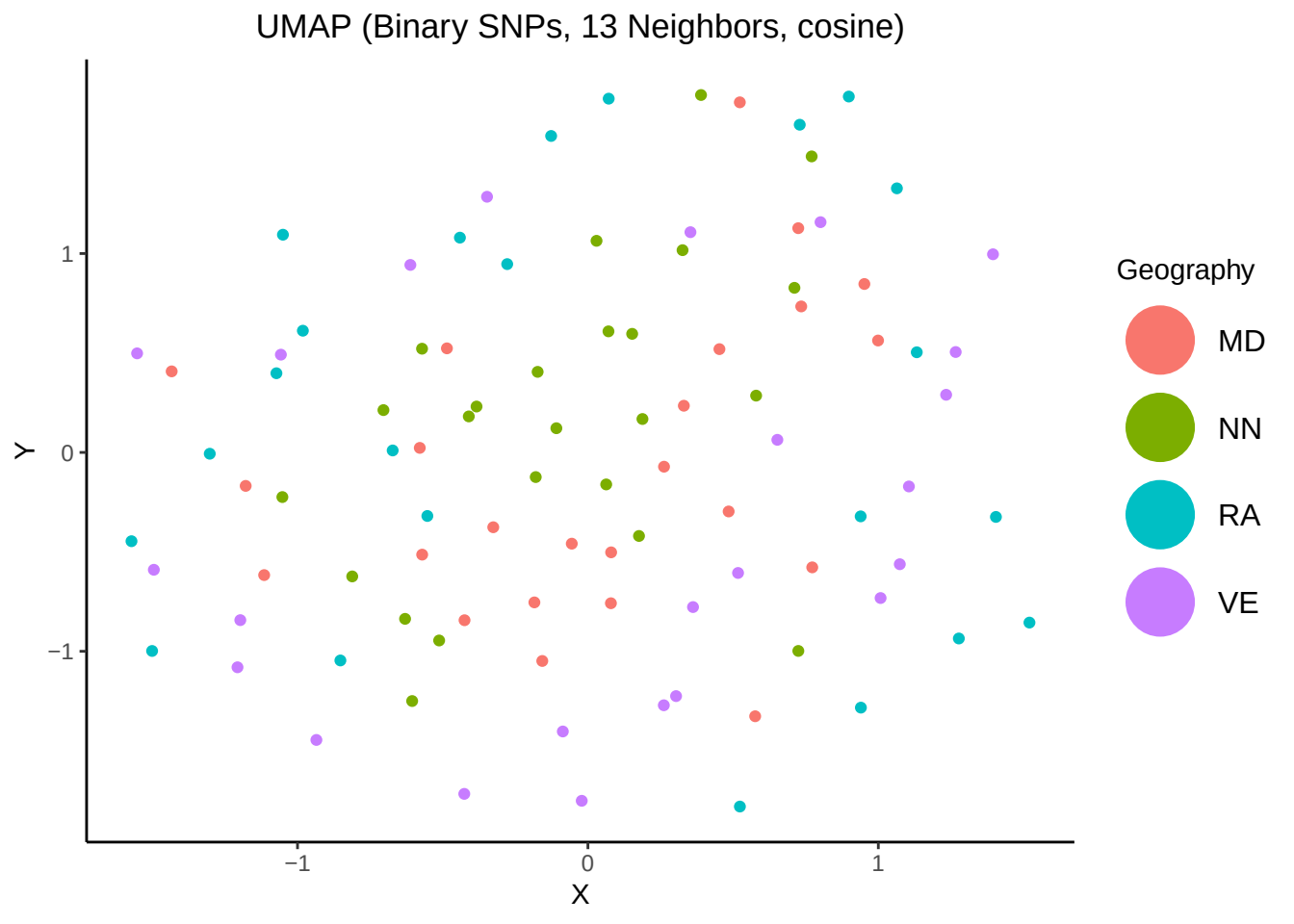
UMAP (Binary SNPs, 13 Neighbors, cosine)
Y
X
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1
Geography
MD
NN
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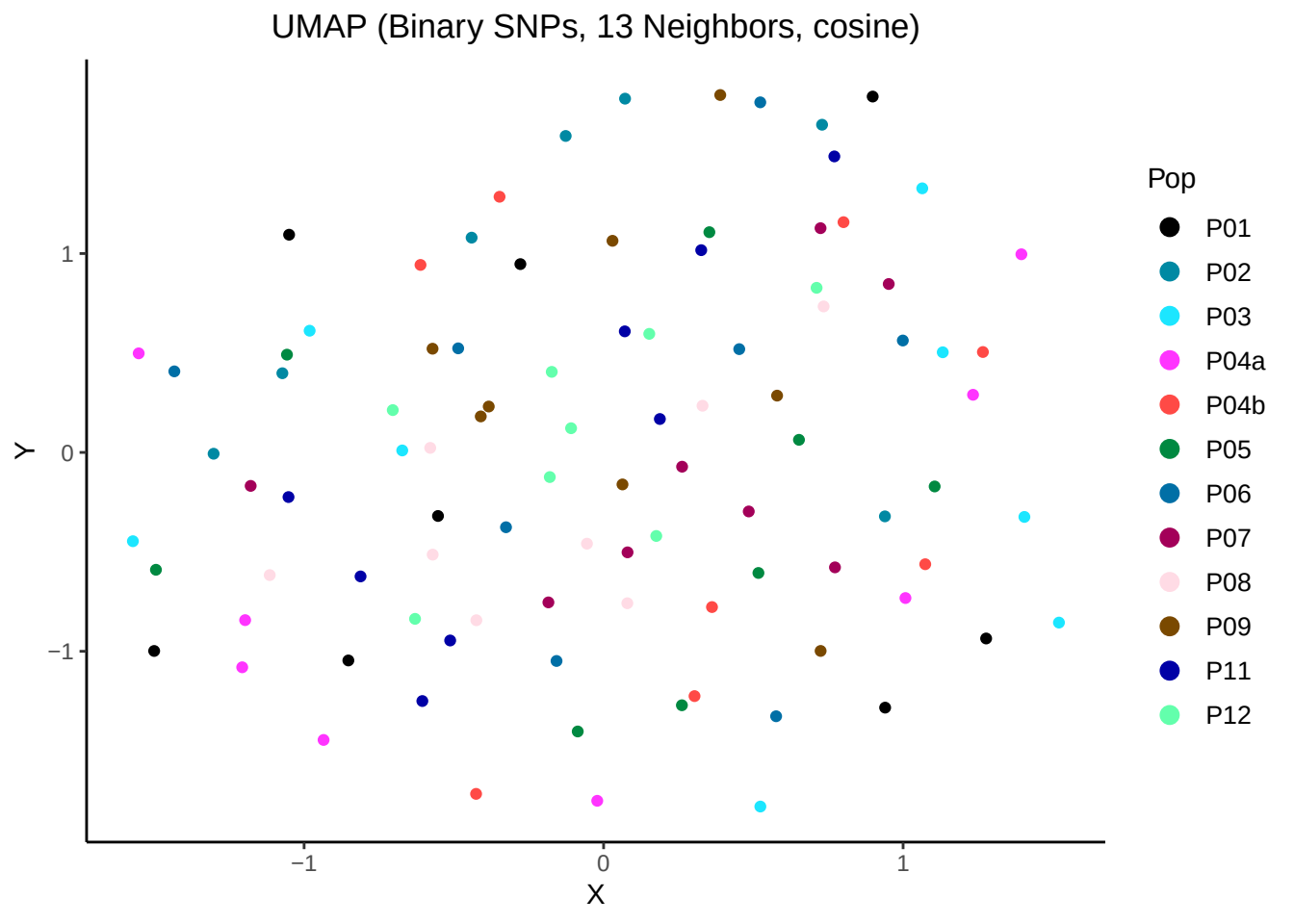
VE


UMAP (Binary SNPs, 13 Neighbors, cosine)
Y
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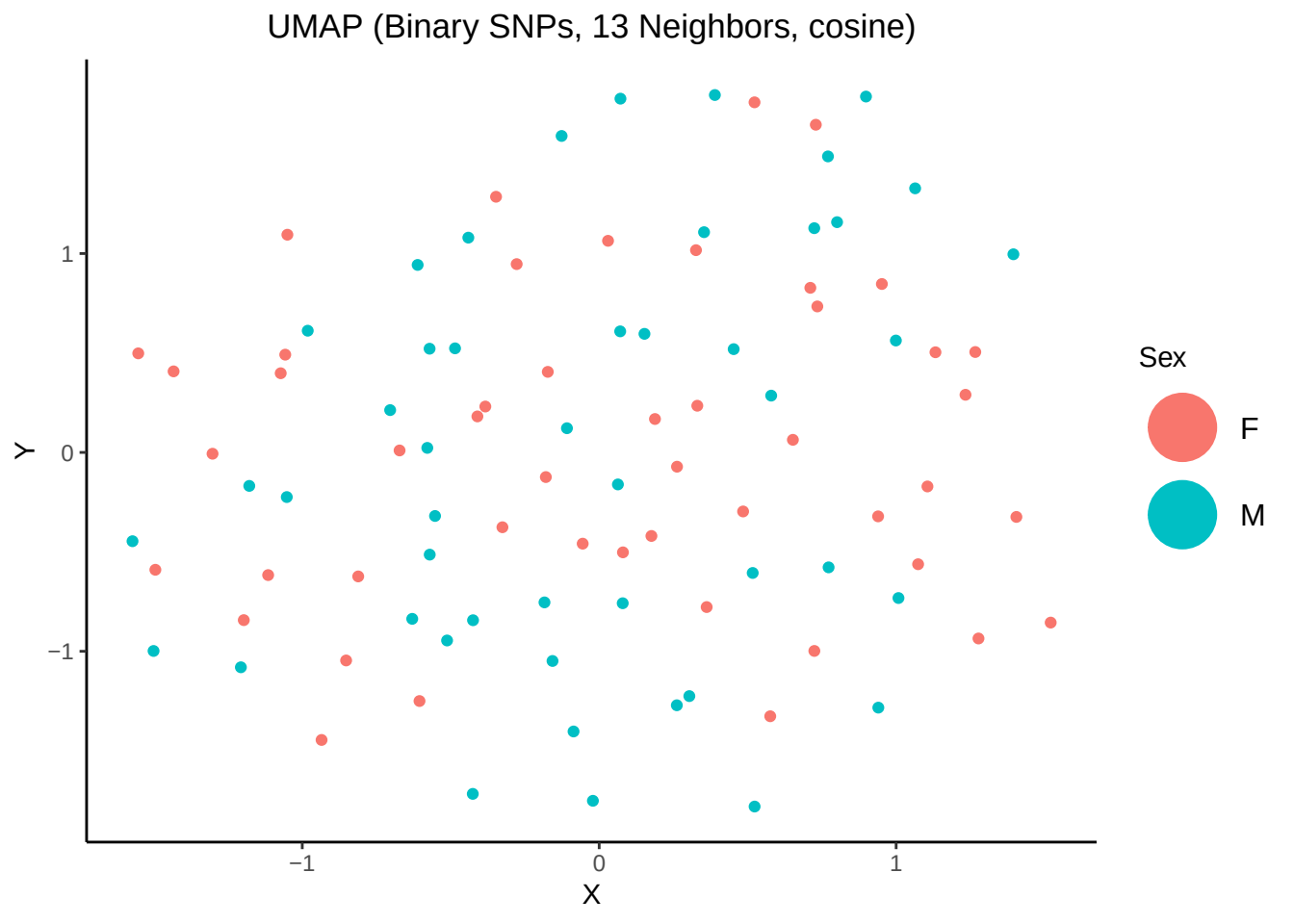
UMAP (Binary SNPs, 13 Neighbors, cosine)
Y
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Sex
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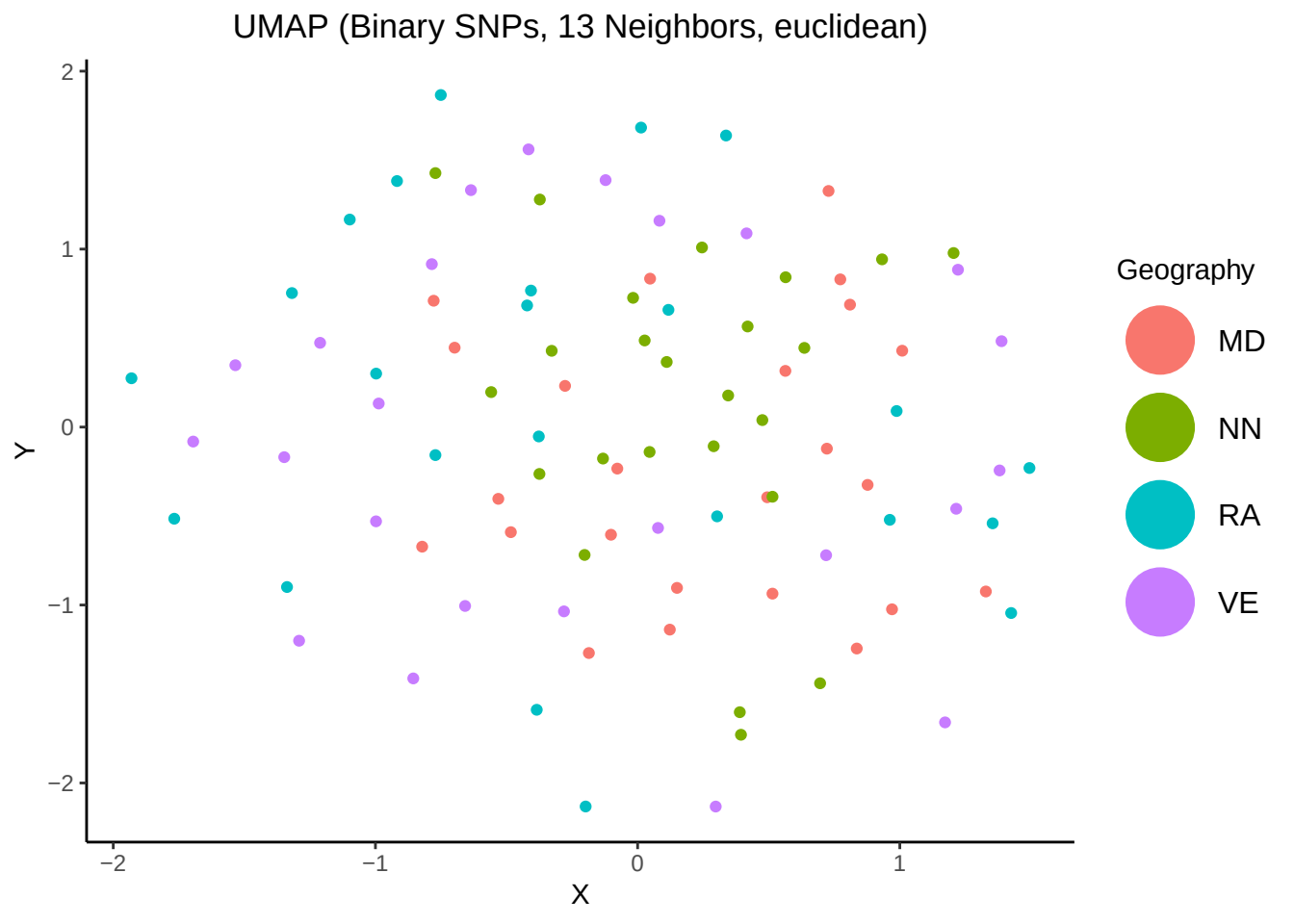
M


UMAP (Binary SNPs, 13 Neighbors, euclidean)
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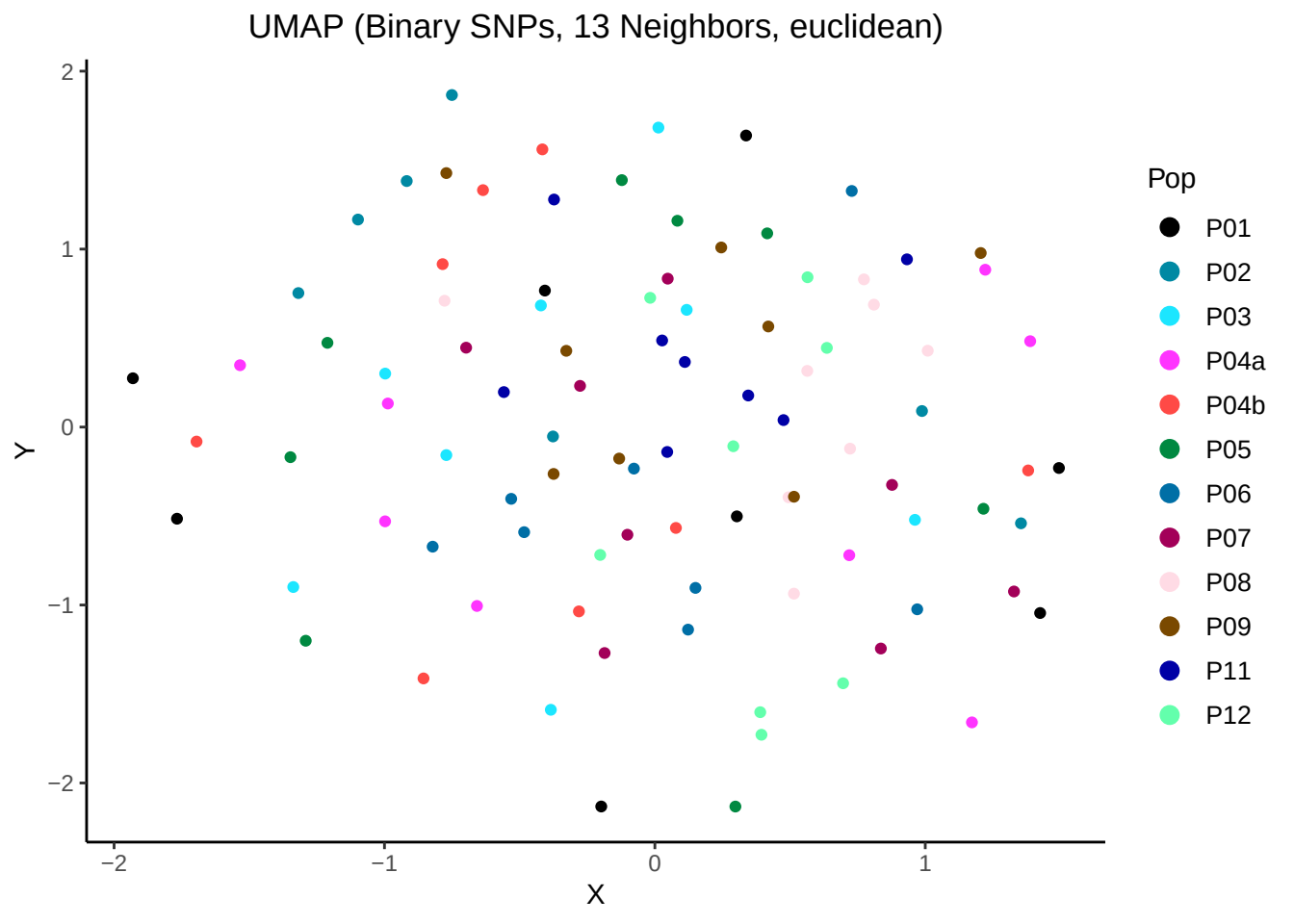
X
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 13 Neighbors, euclidean)
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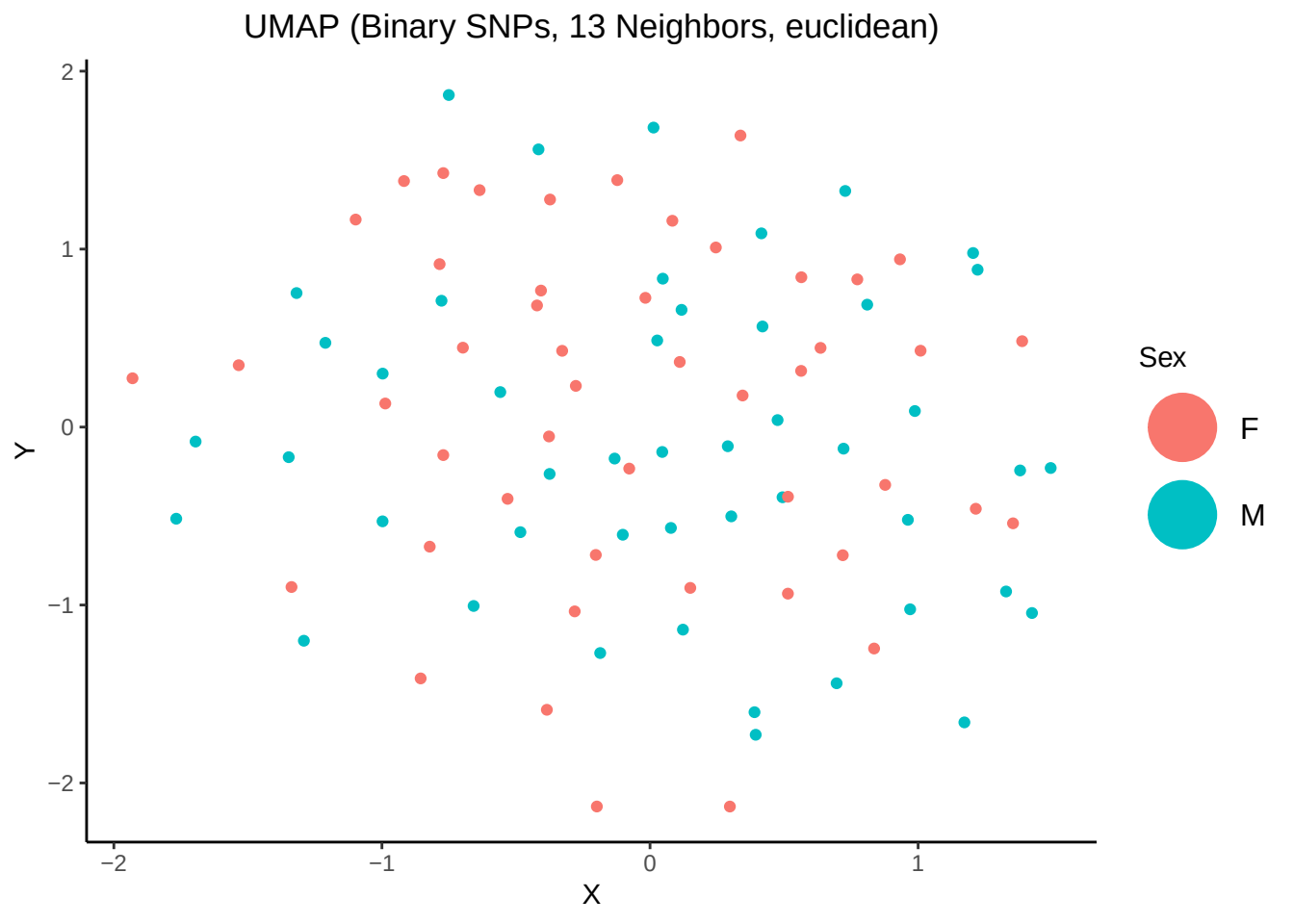
UMAP (Binary SNPs, 13 Neighbors, euclidean)
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Y
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X
Sex
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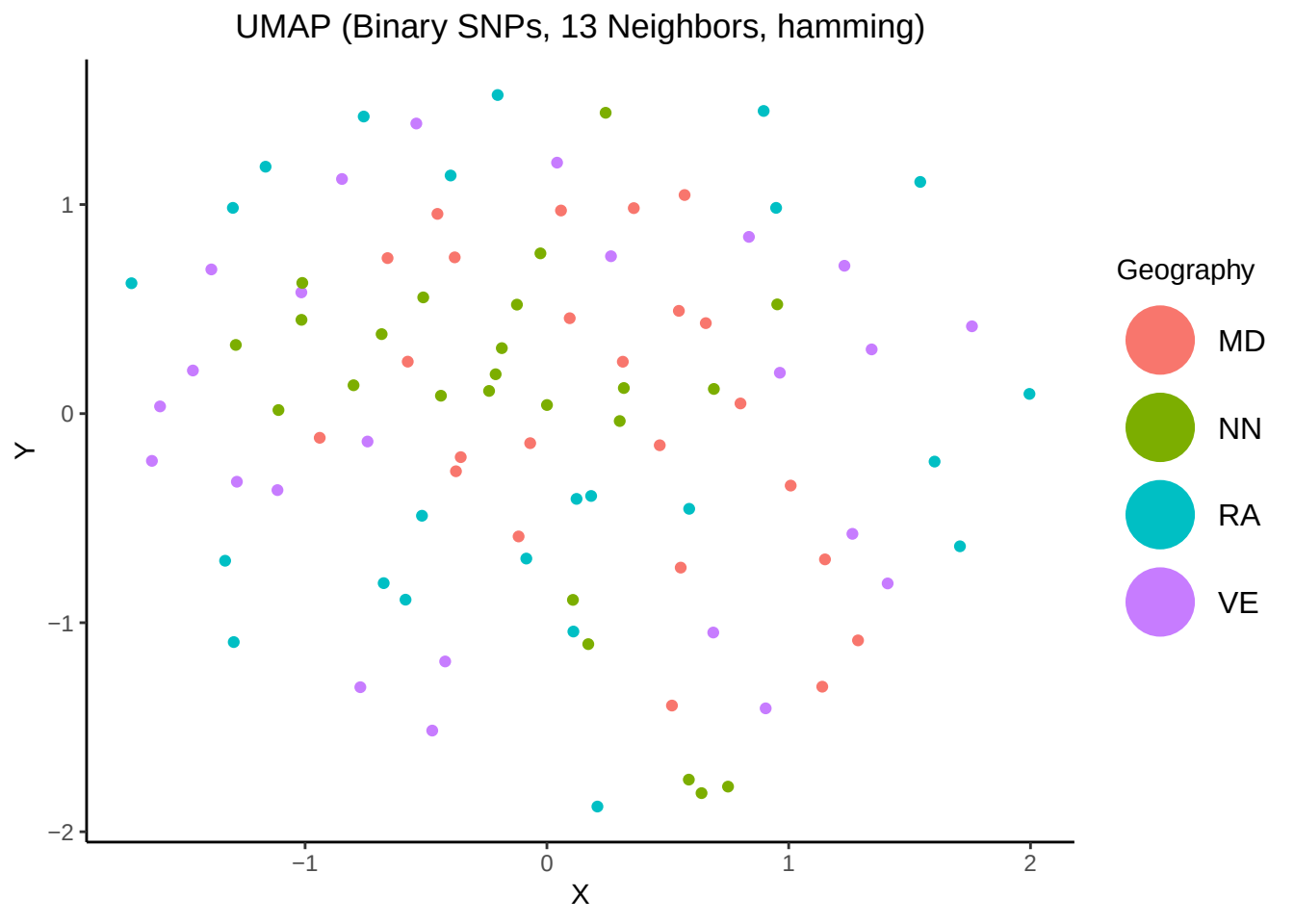
M


UMAP (Binary SNPs, 13 Neighbors, hamming)
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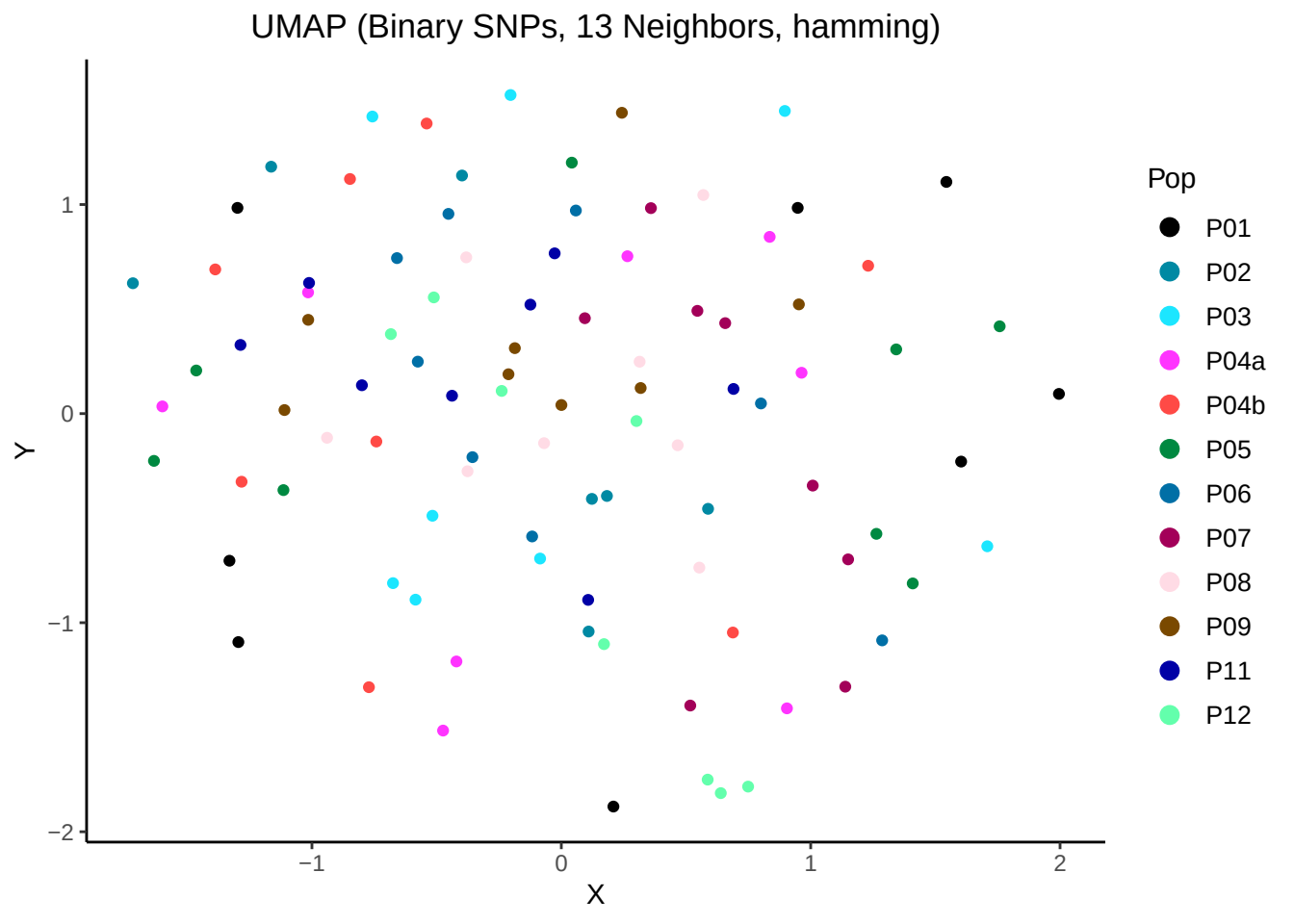
VE


UMAP (Binary SNPs, 13 Neighbors, hamming)
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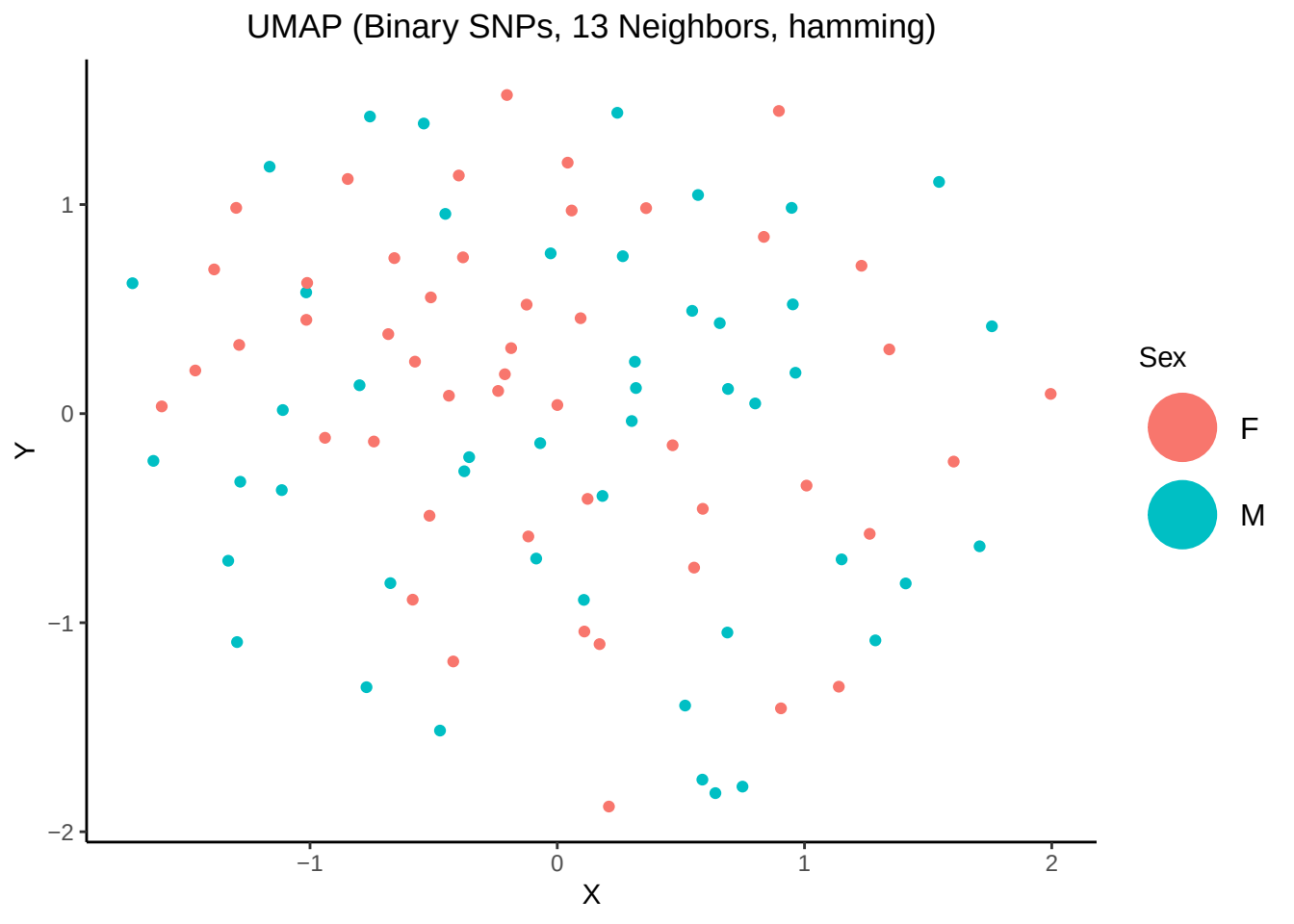
UMAP (Binary SNPs, 13 Neighbors, hamming)
Y
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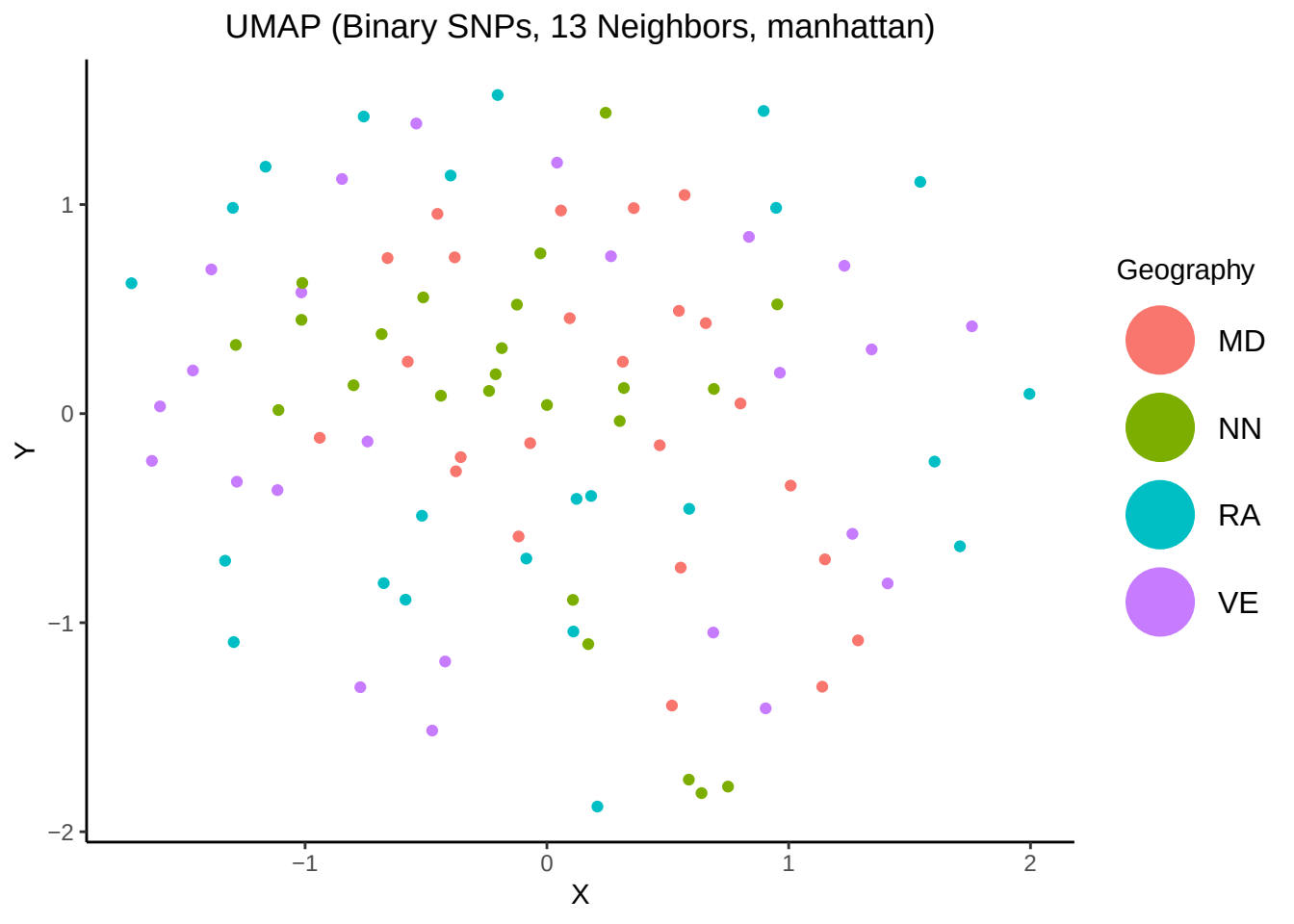
2
Sex
F
M


UMAP (Binary SNPs, 13 Neighbors, manhattan)
Y
X
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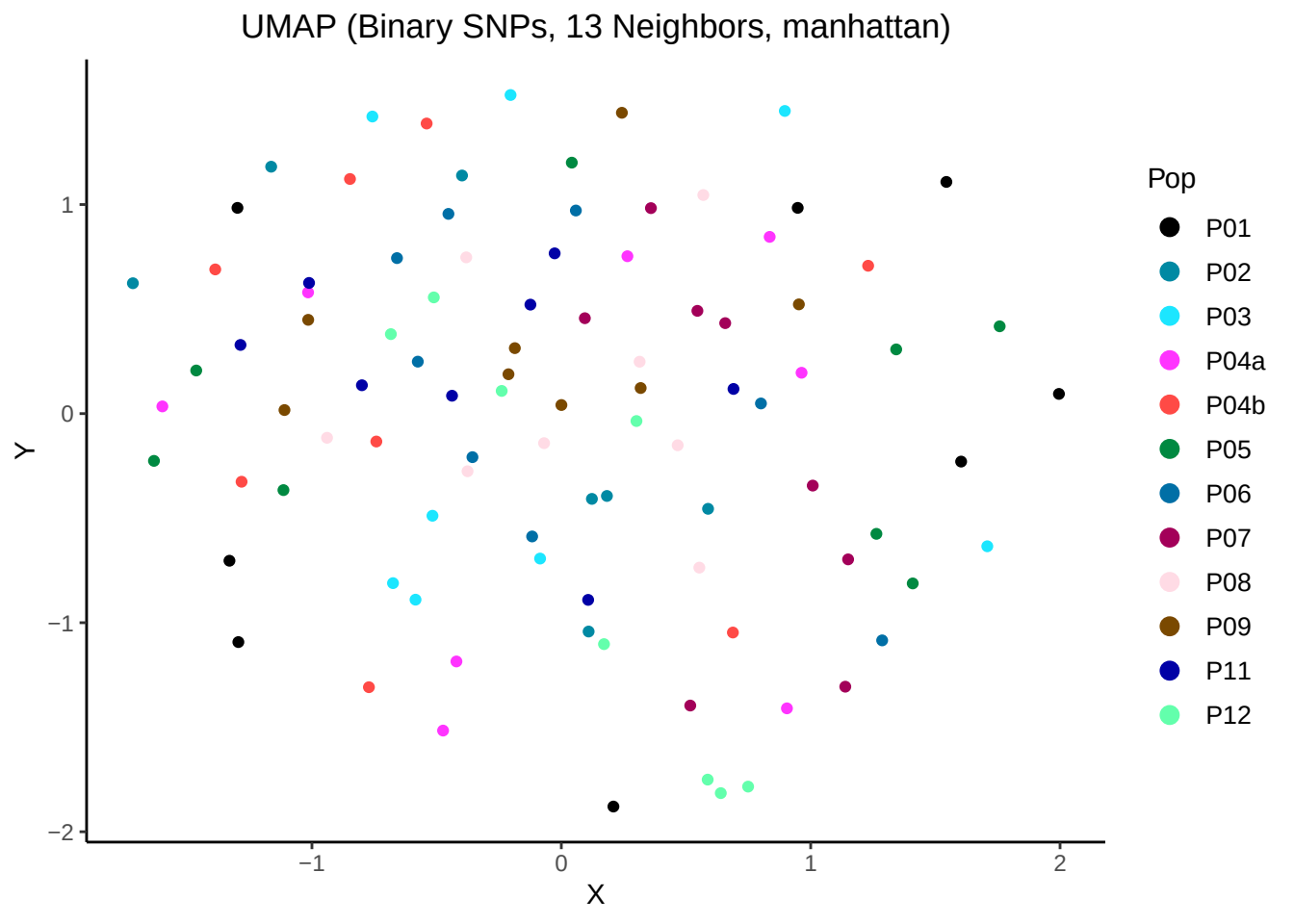
1
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 13 Neighbors, manhattan)
Y
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Pop
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P04a
P04b
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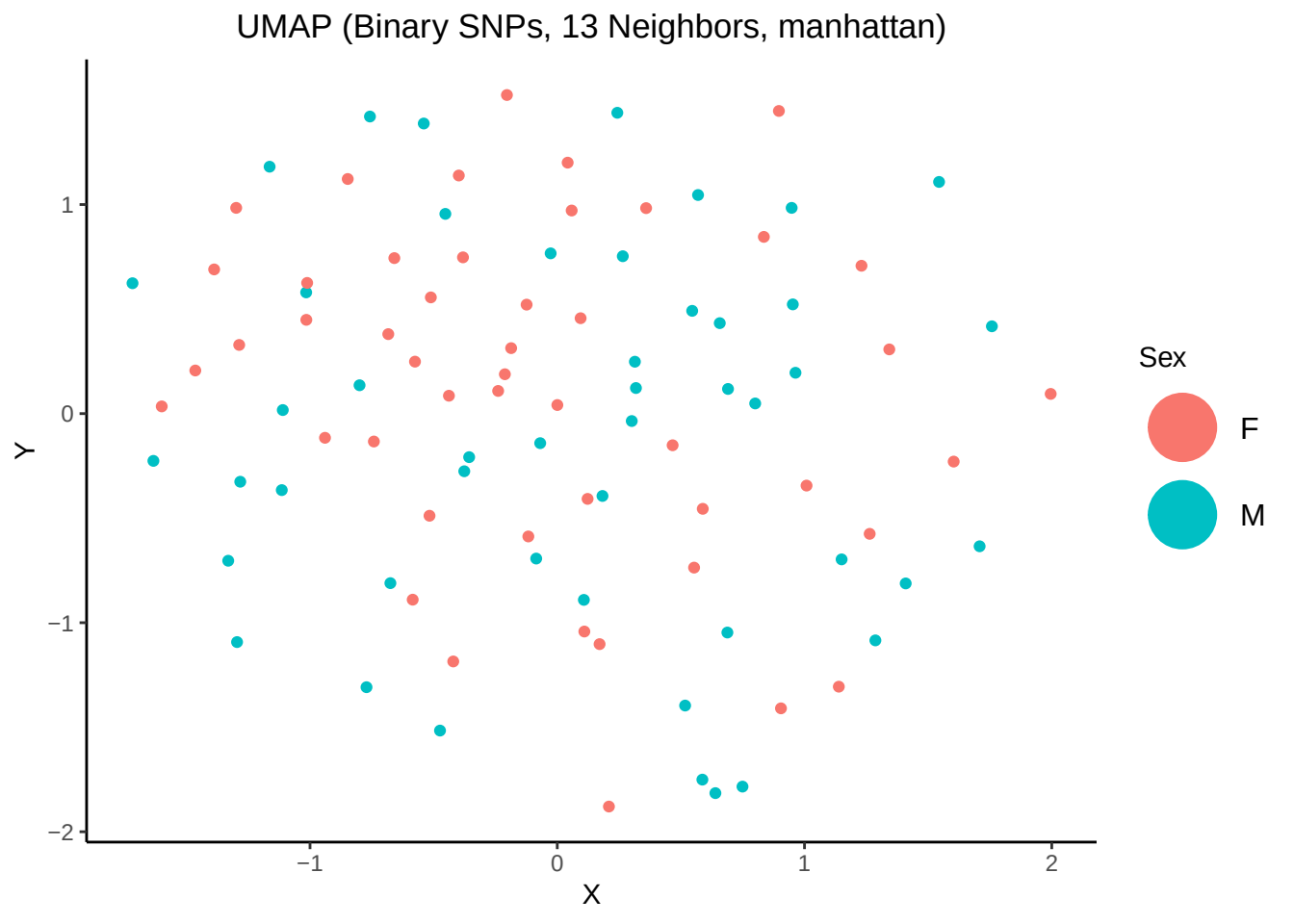
UMAP (Binary SNPs, 13 Neighbors, manhattan)
Y
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Sex
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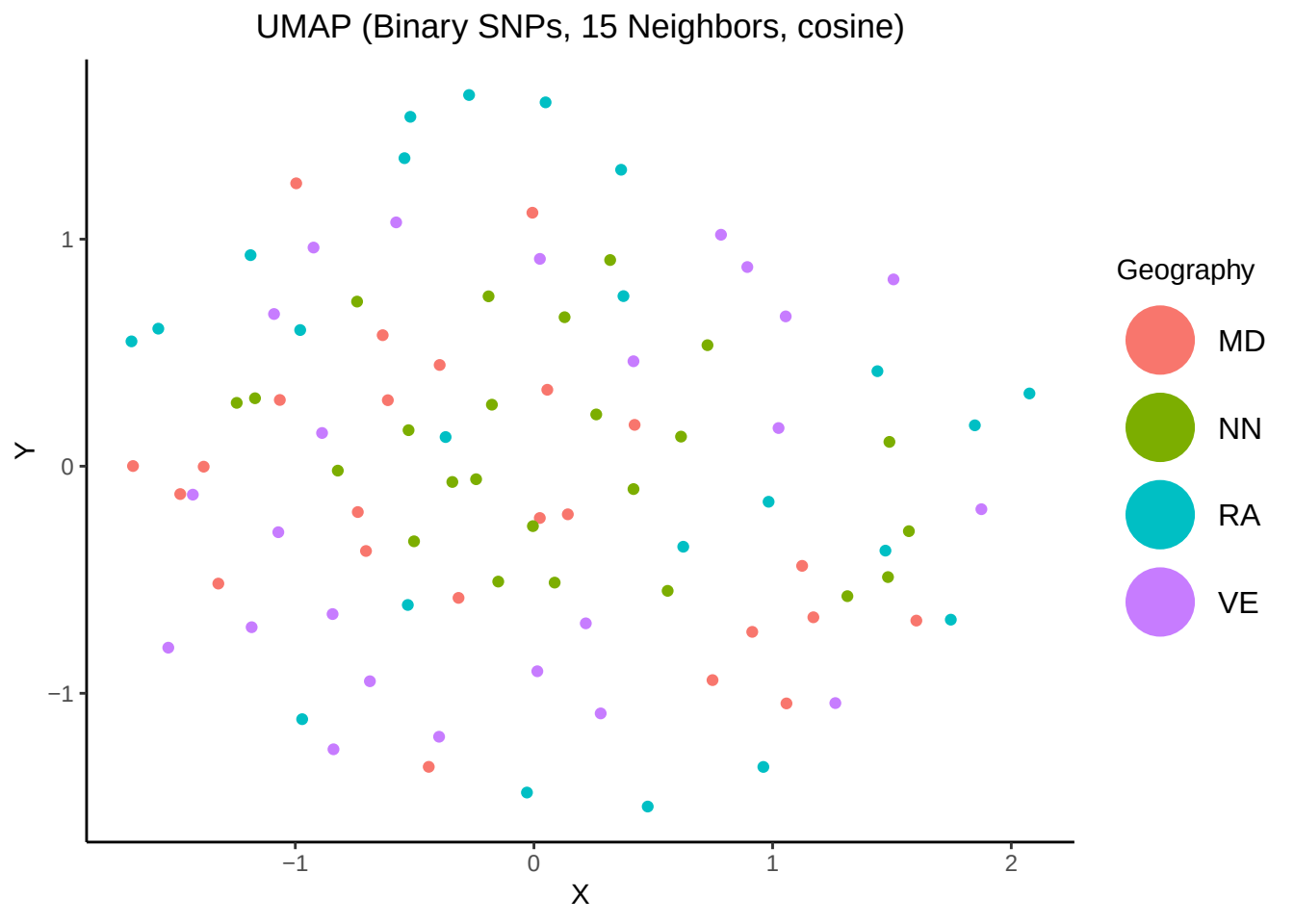
M


UMAP (Binary SNPs, 15 Neighbors, cosine)
Y
X
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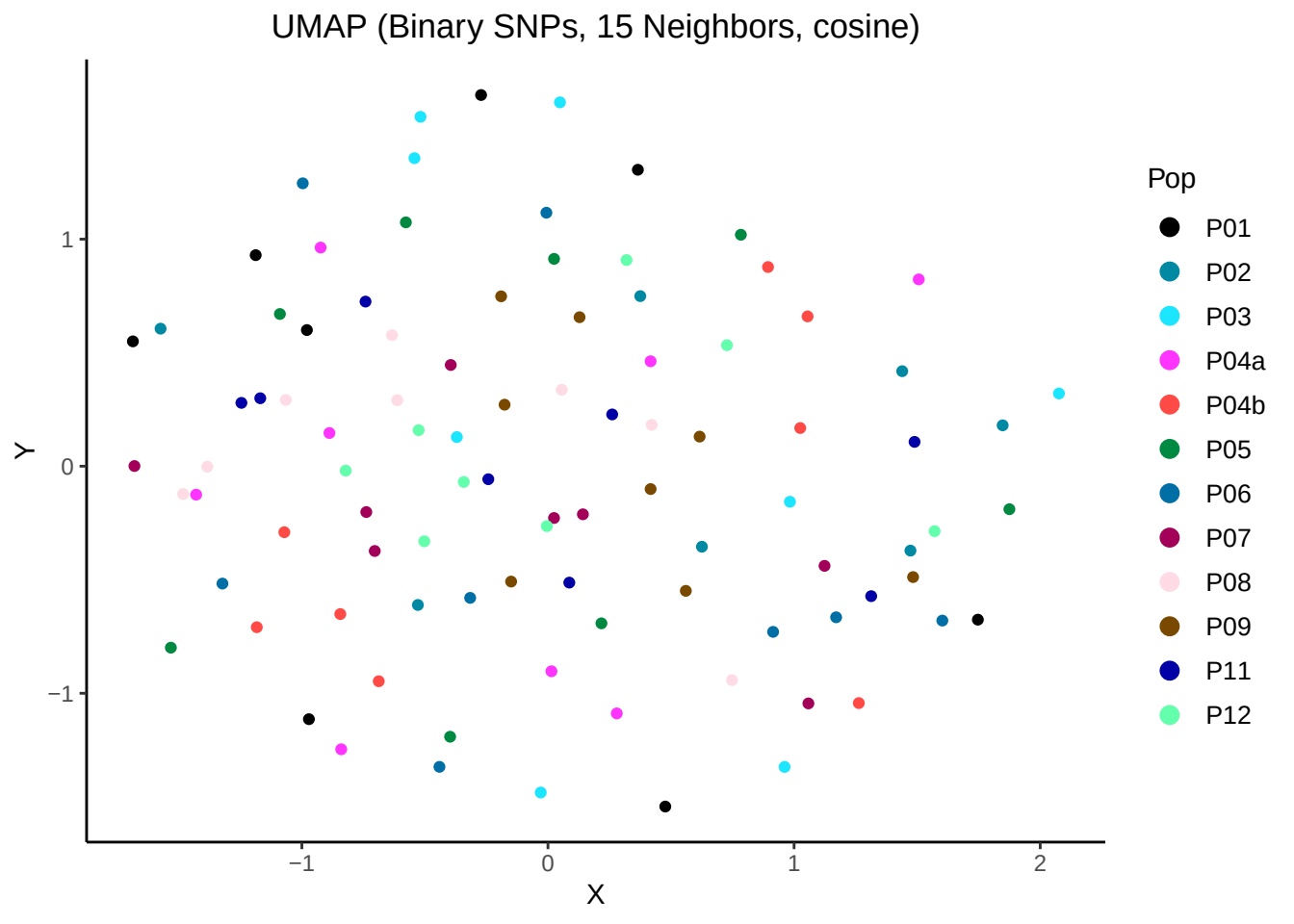
1
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 15 Neighbors, cosine)
Y
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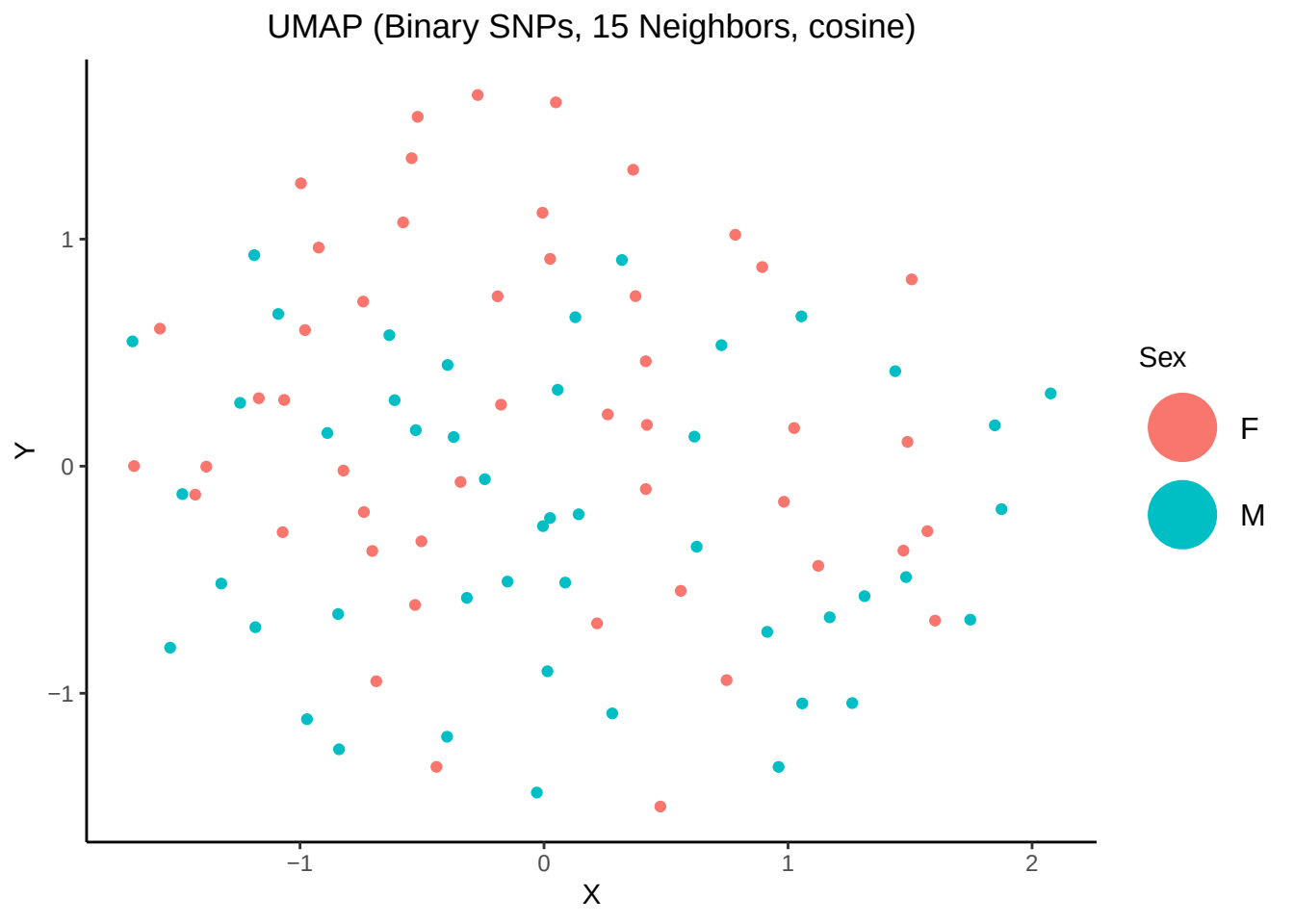
UMAP (Binary SNPs, 15 Neighbors, cosine)
Y
X
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Sex
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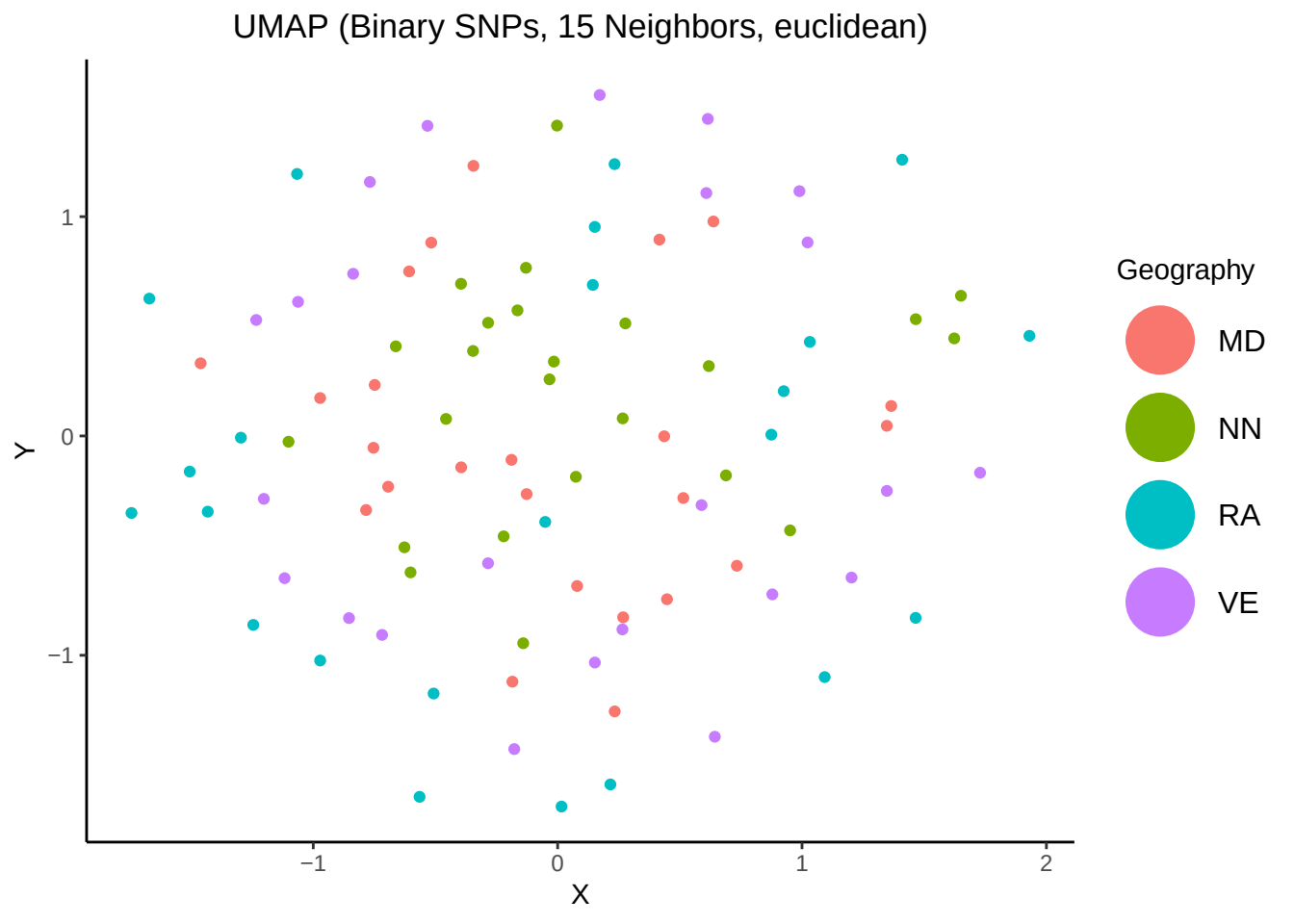
M


UMAP (Binary SNPs, 15 Neighbors, euclidean)
Y
X
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2
Geography
MD
NN
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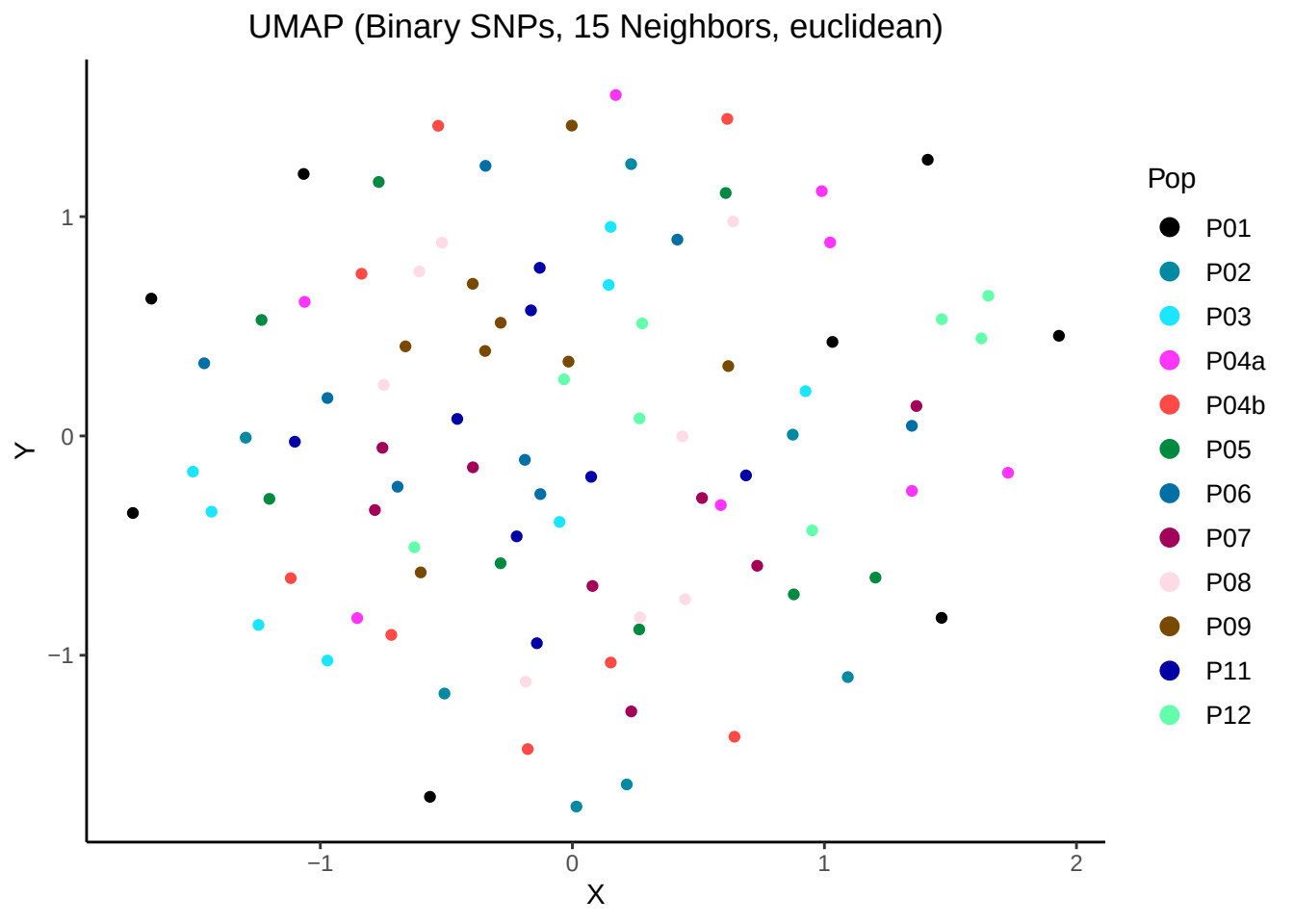
VE


UMAP (Binary SNPs, 15 Neighbors, euclidean)
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Pop
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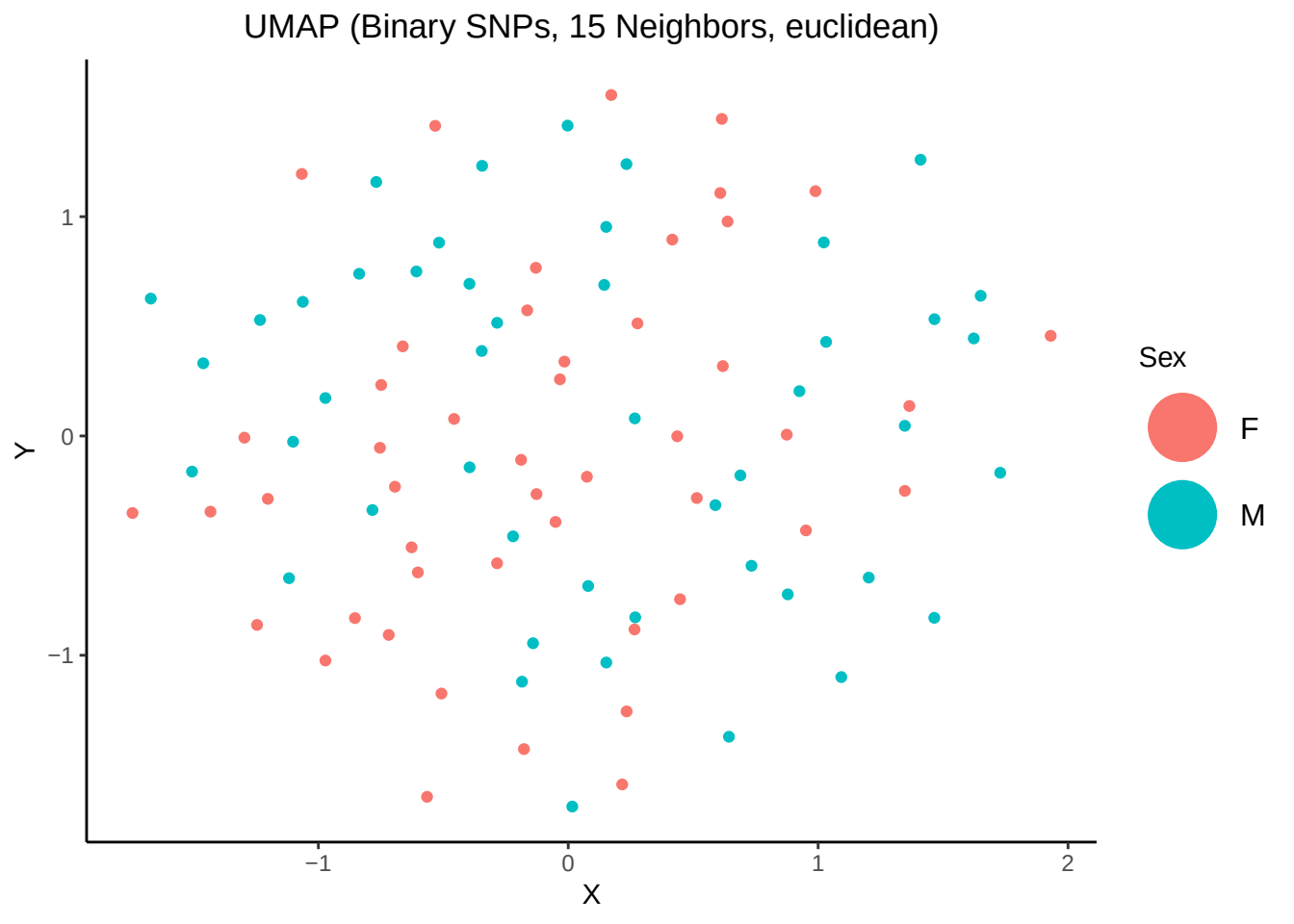
UMAP (Binary SNPs, 15 Neighbors, euclidean)
Y
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Sex
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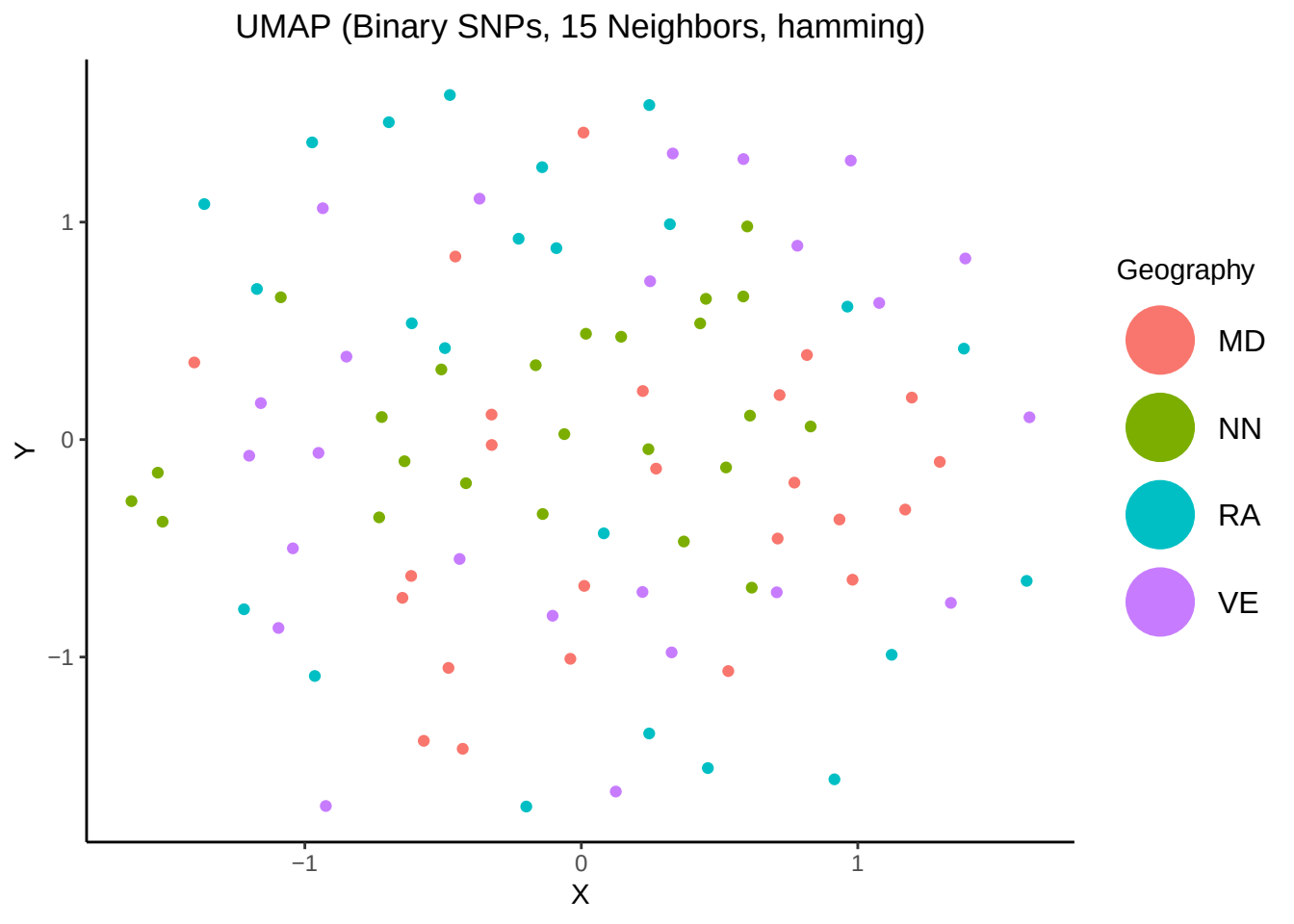
UMAP (Binary SNPs, 15 Neighbors, hamming)
Y
X
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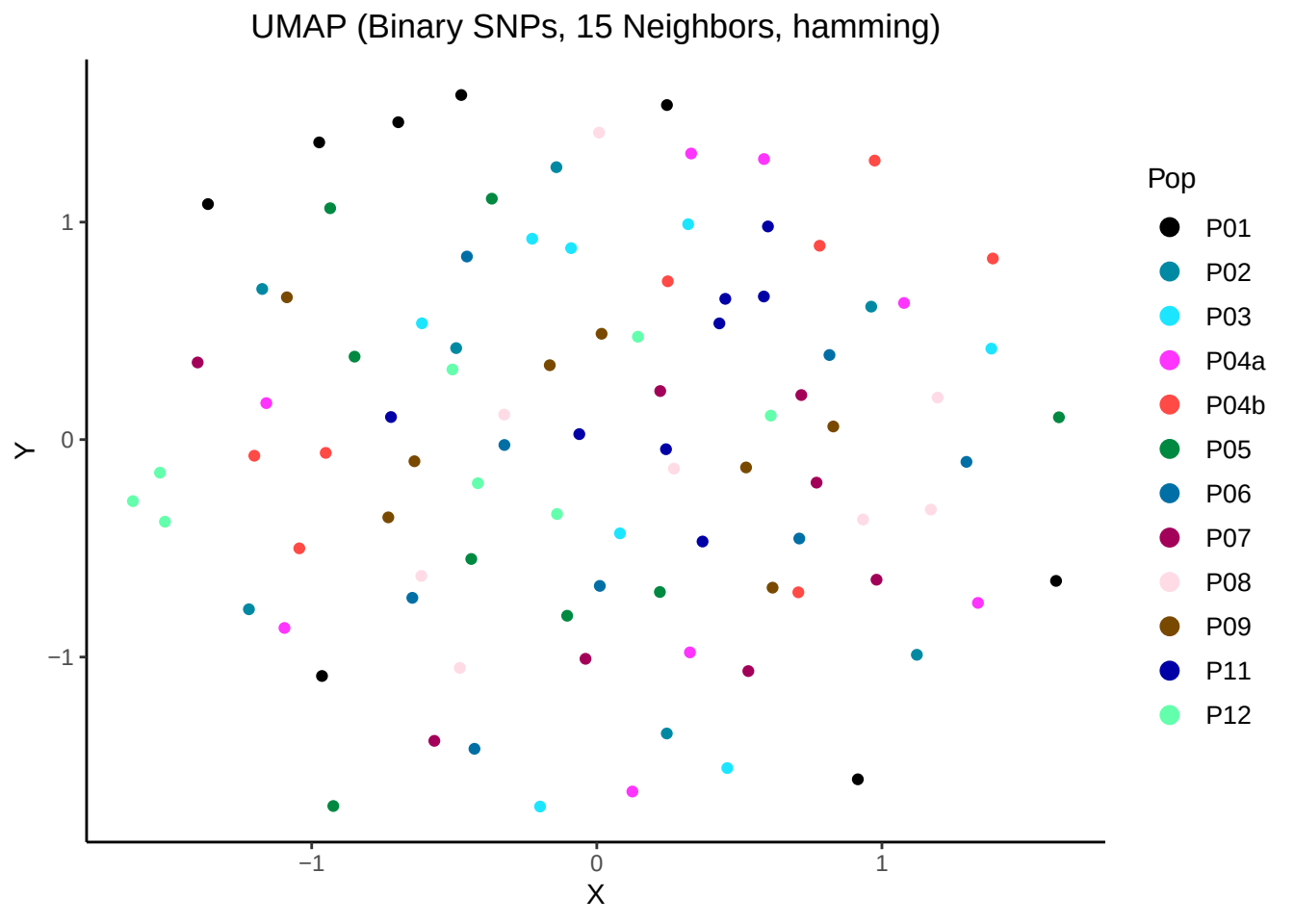
1
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 15 Neighbors, hamming)
Y
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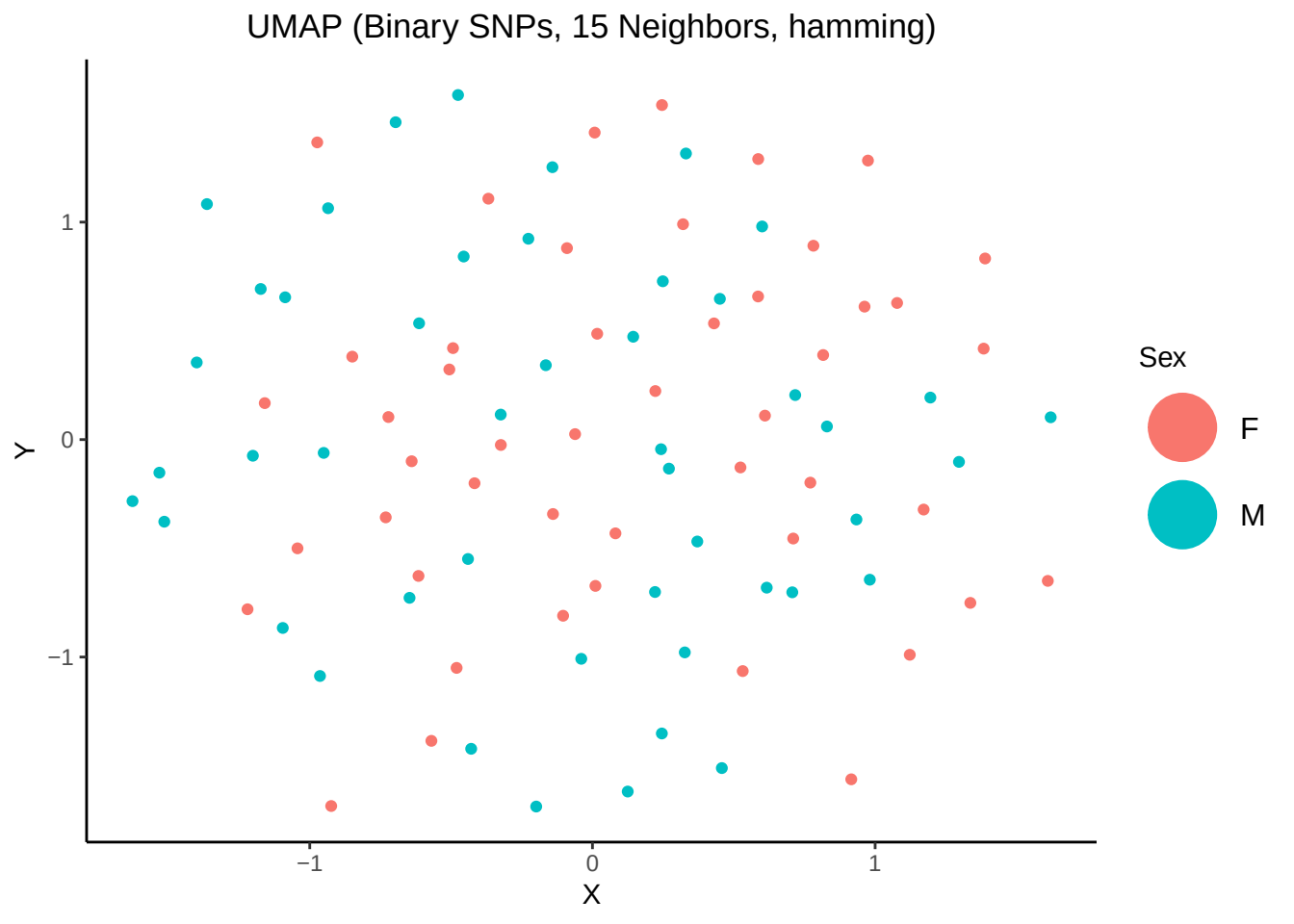
UMAP (Binary SNPs, 15 Neighbors, hamming)
Y
X
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Sex
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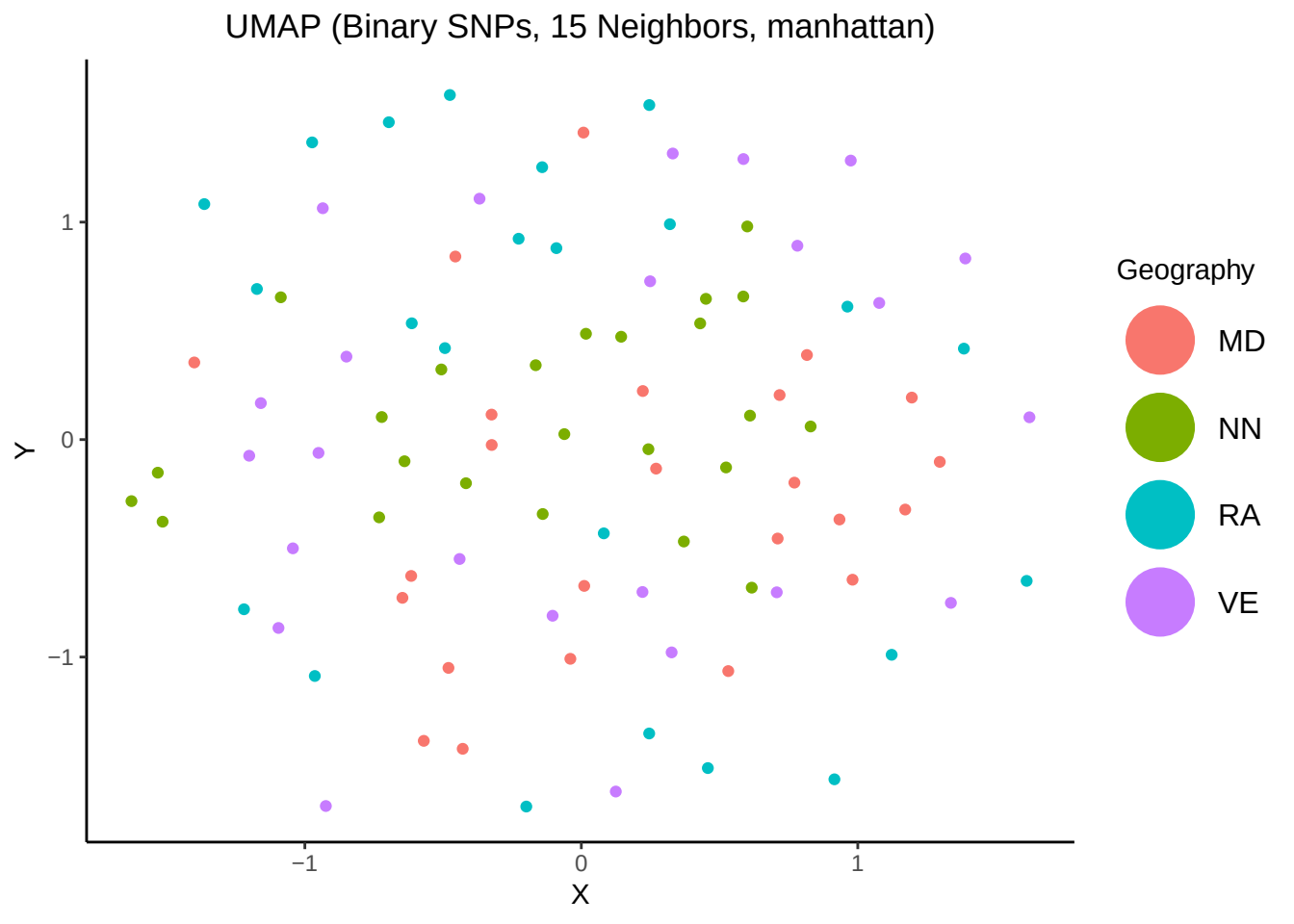
UMAP (Binary SNPs, 15 Neighbors, manhattan)
Y
X
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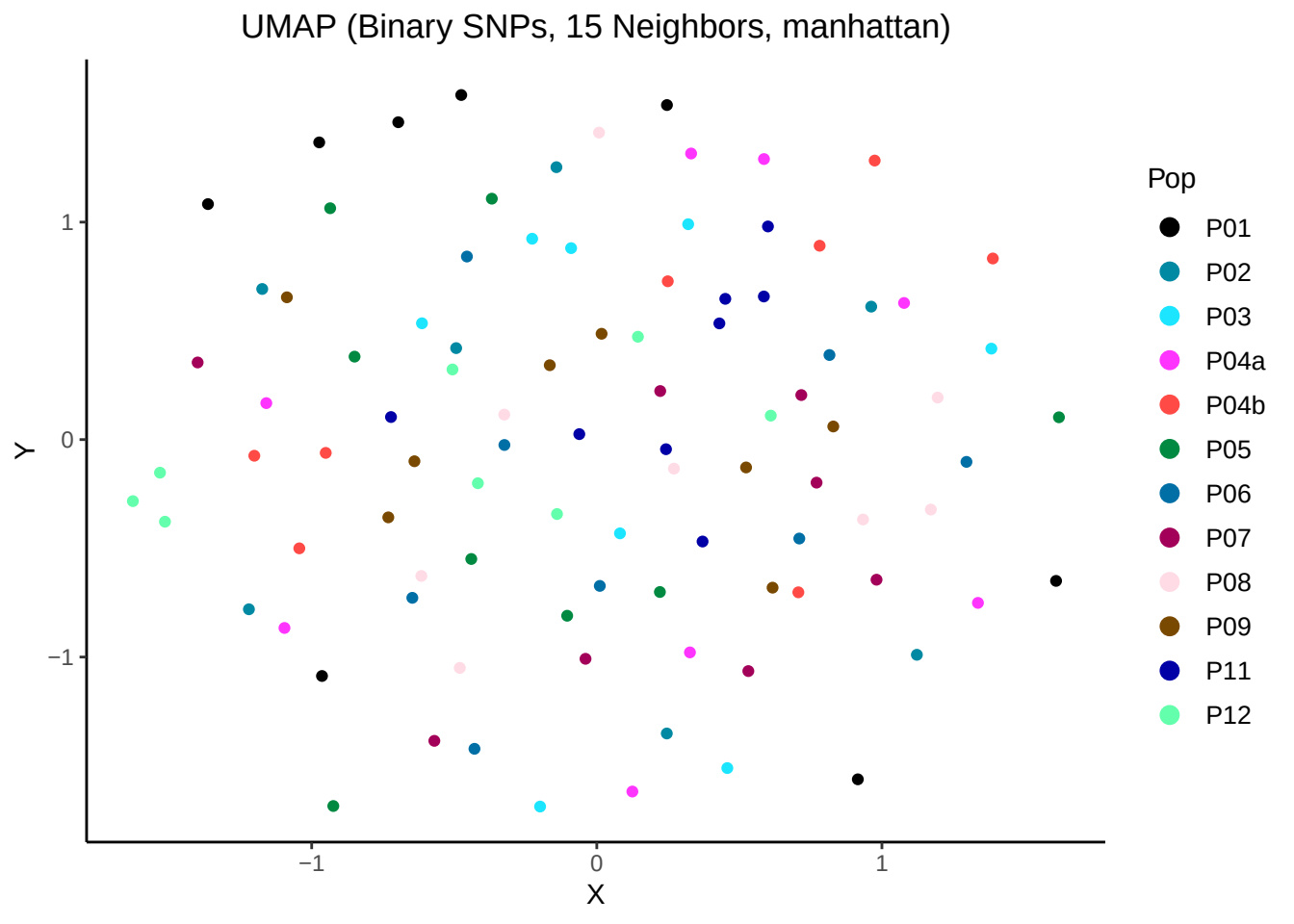
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 15 Neighbors, manhattan)
Y
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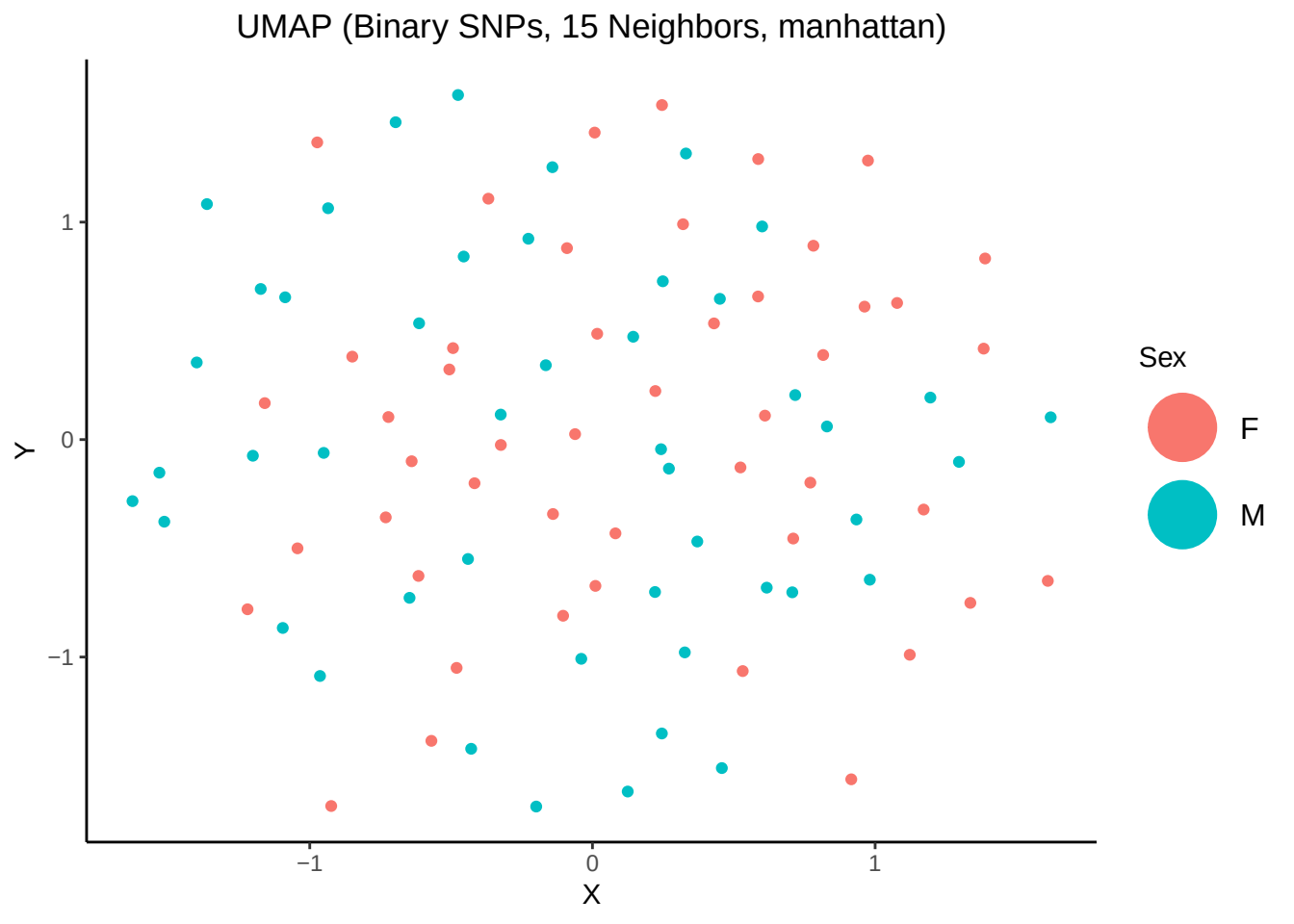
UMAP (Binary SNPs, 15 Neighbors, manhattan)
Y
X
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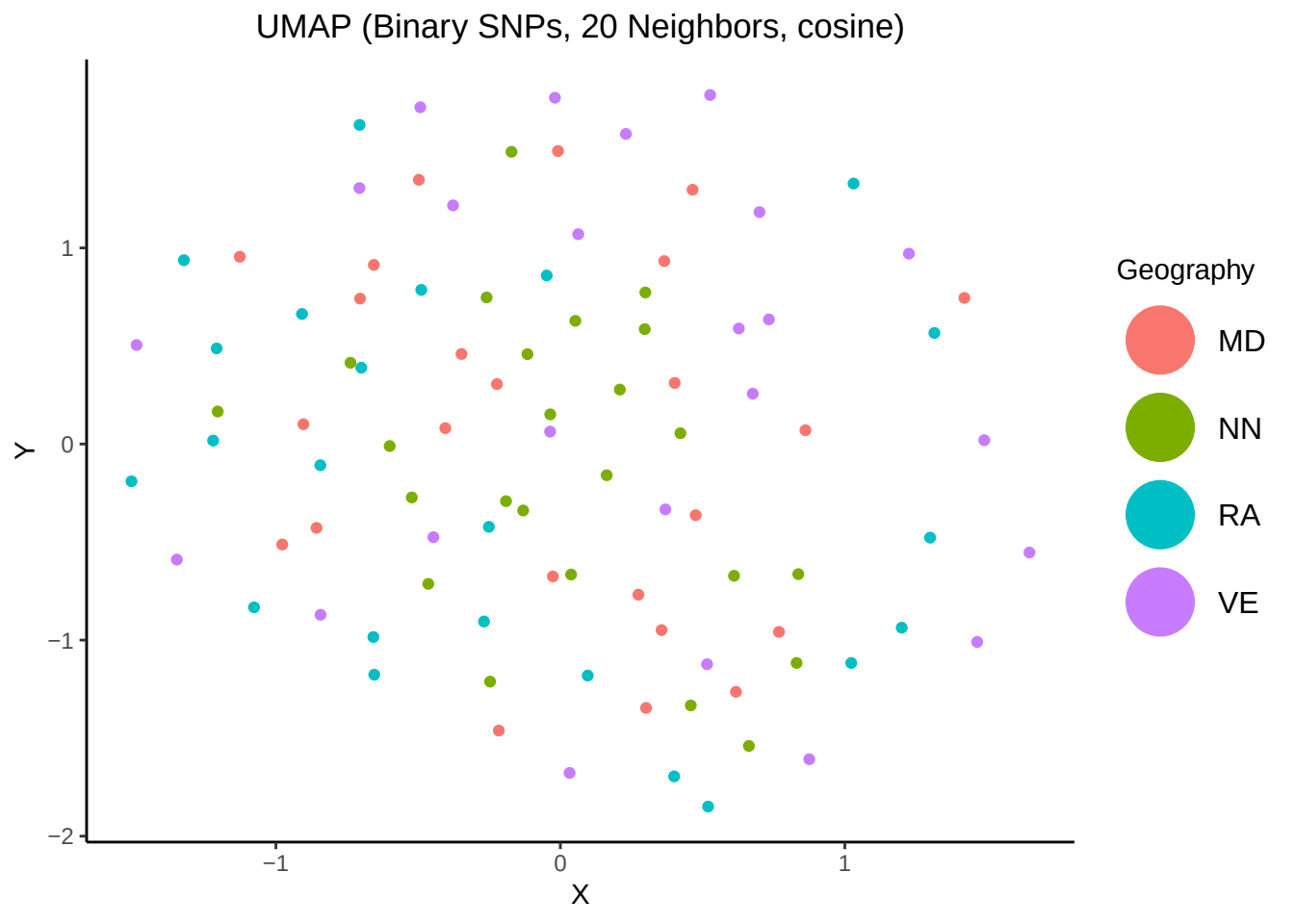
Sex
F
M


UMAP (Binary SNPs, 20 Neighbors, cosine)
Y
X
1
0
−1
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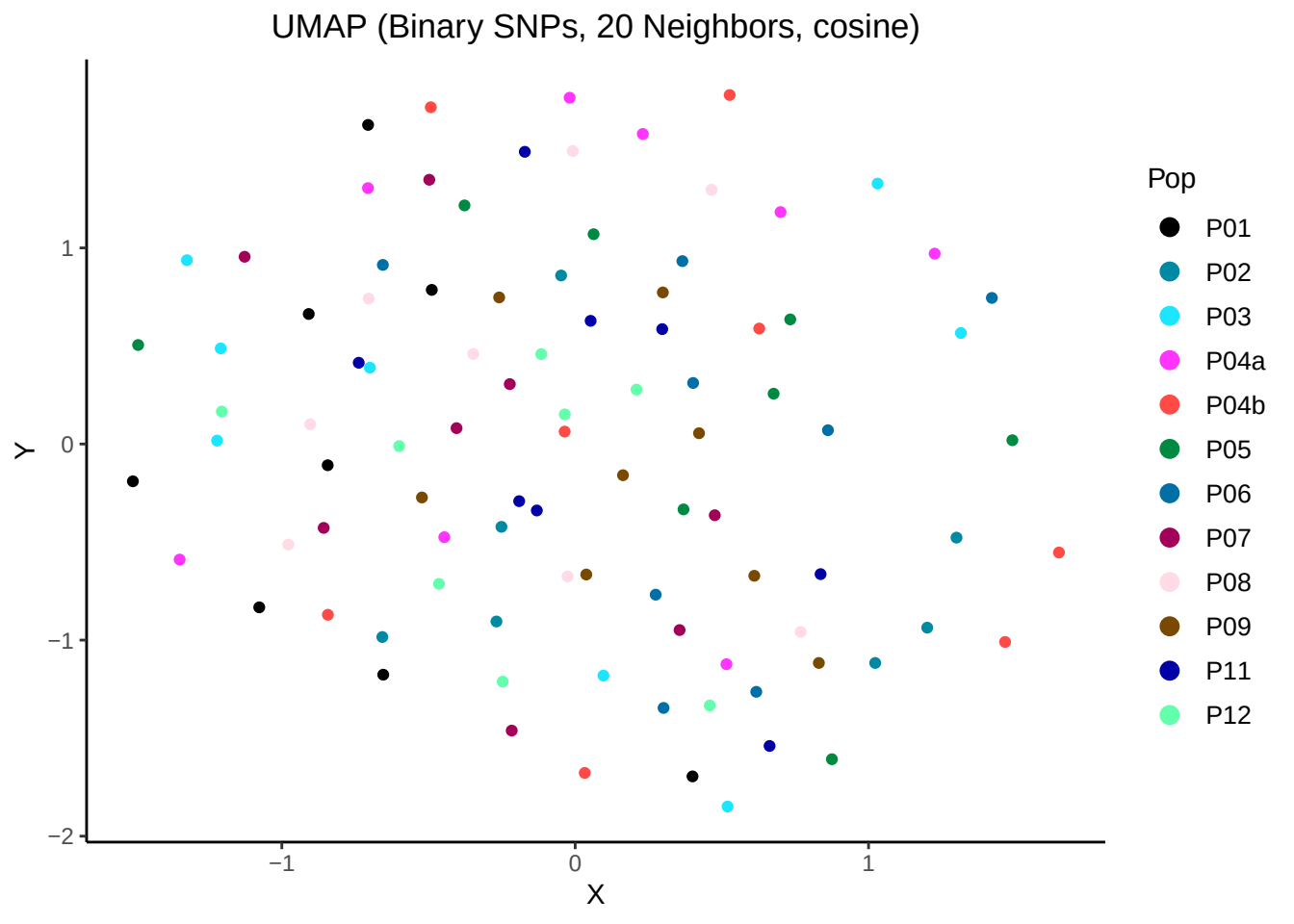
−1
0
1
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 20 Neighbors, cosine)
Y
X
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Pop
P01
P02
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P04a
P04b
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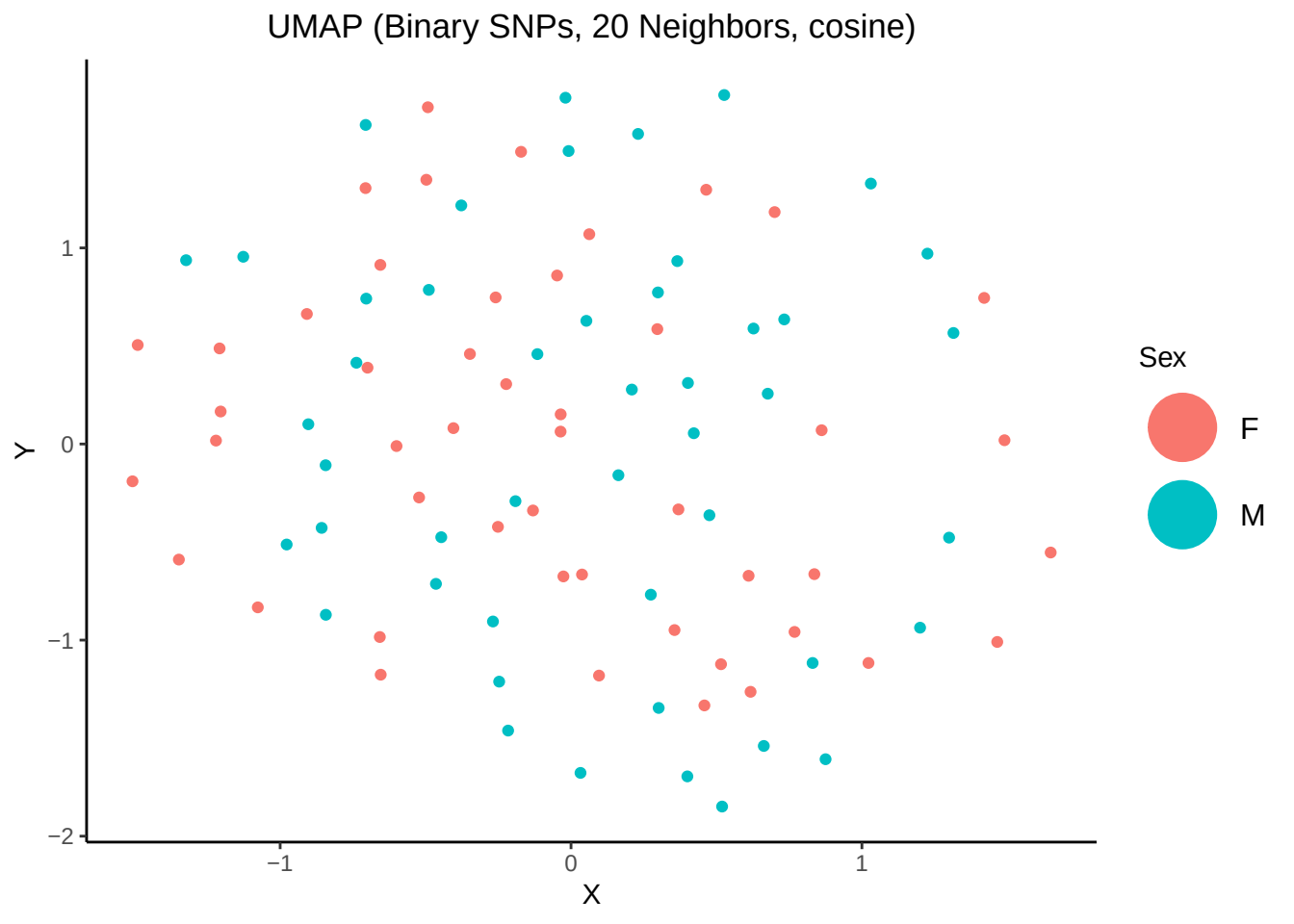
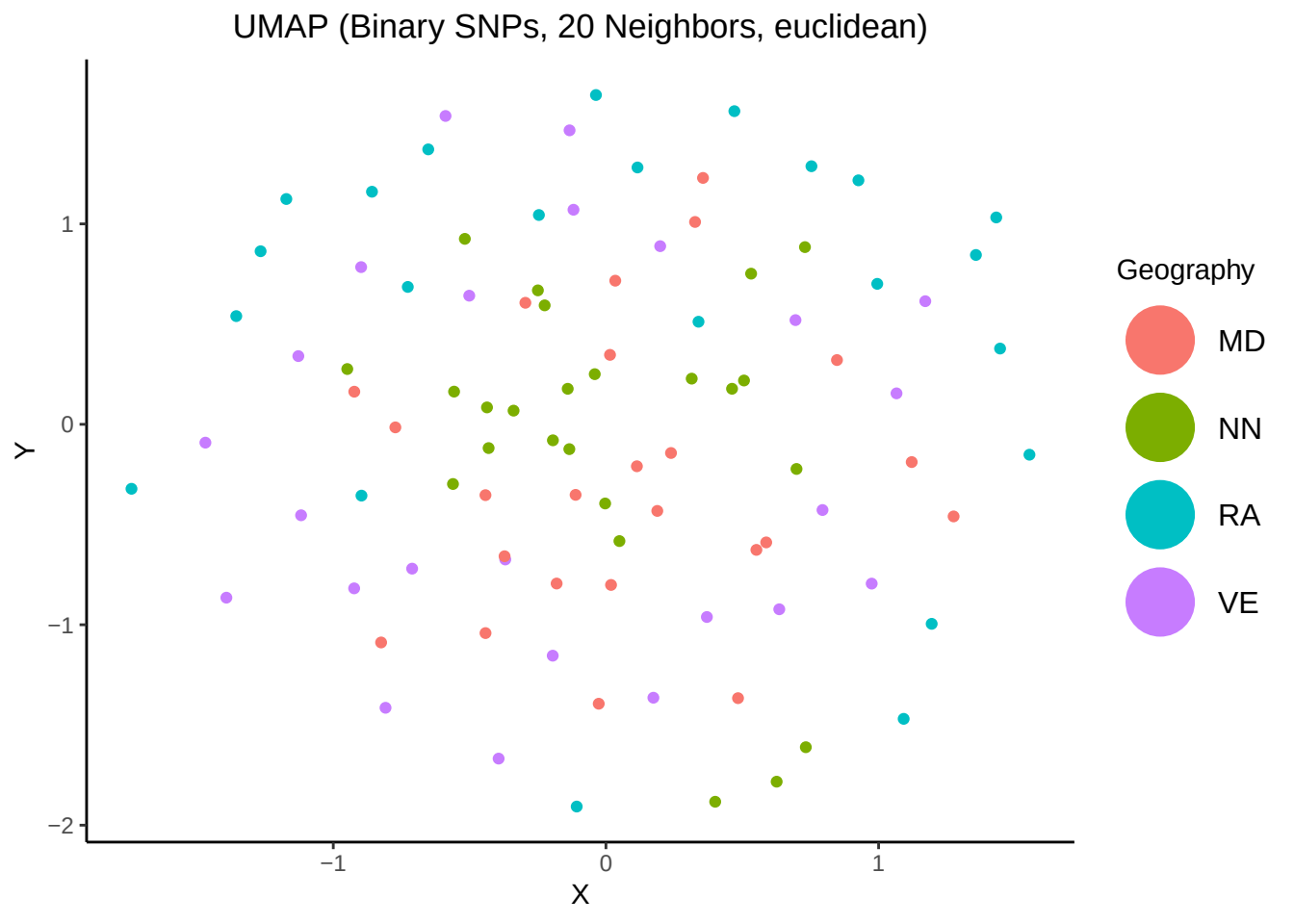
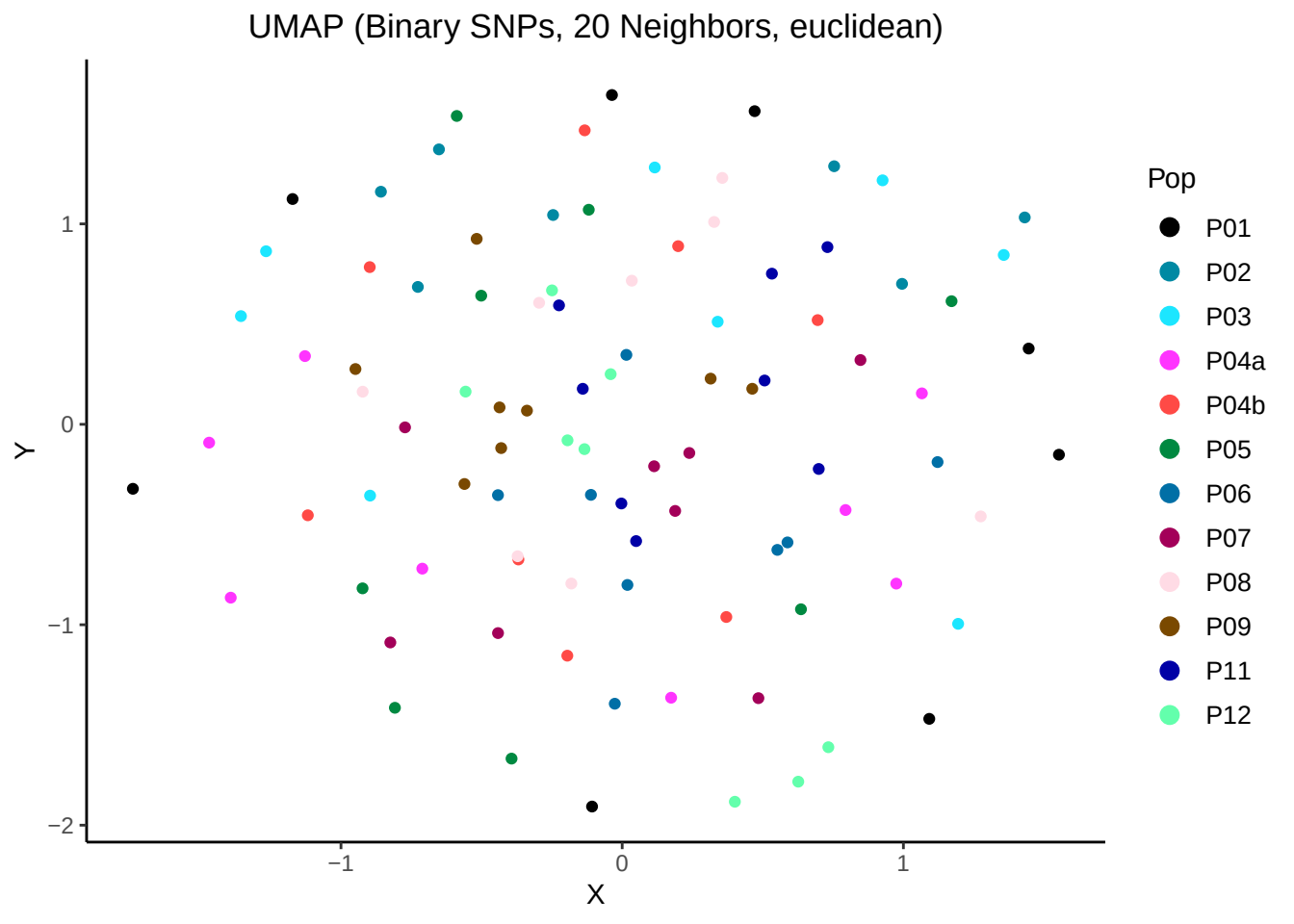
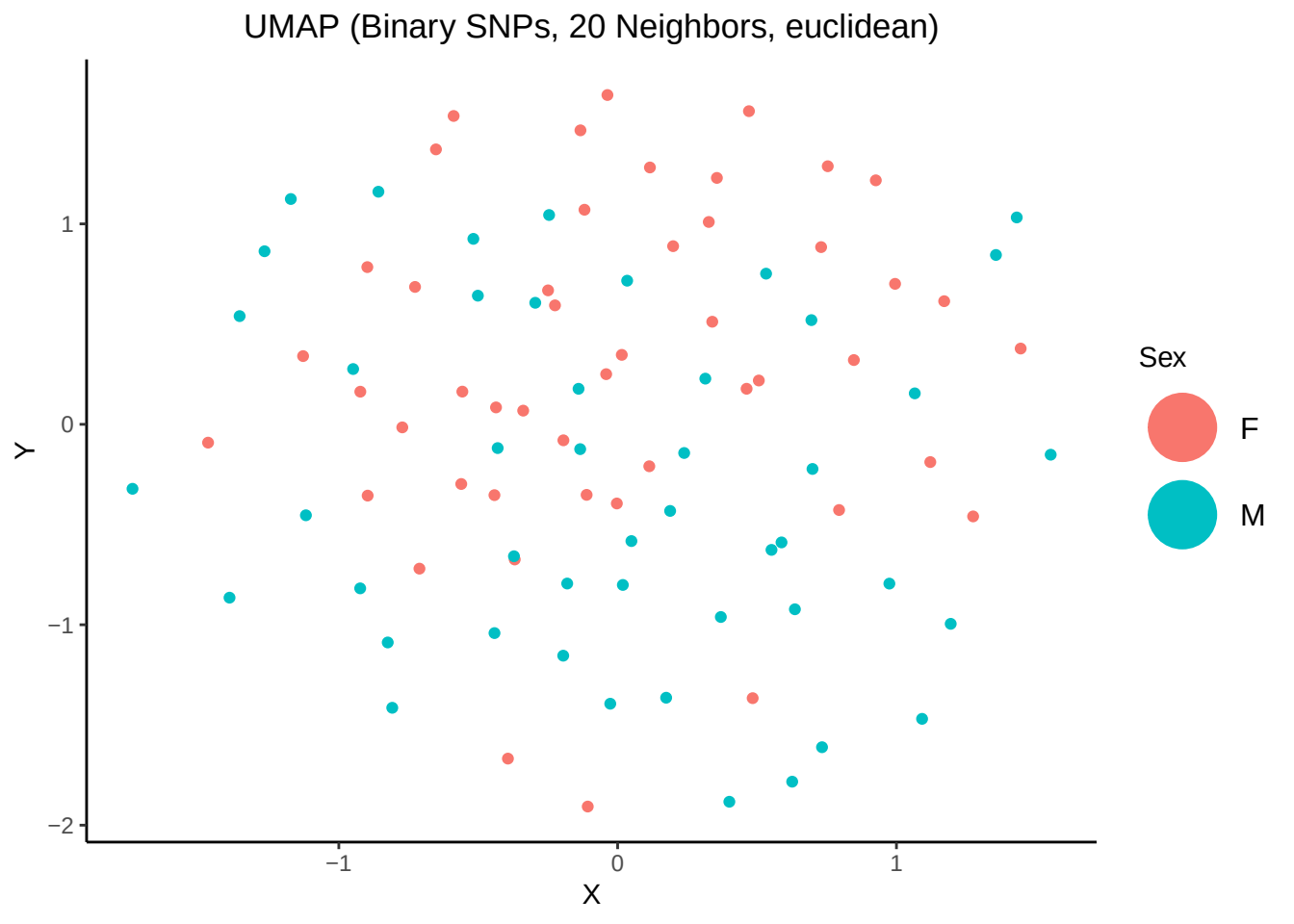
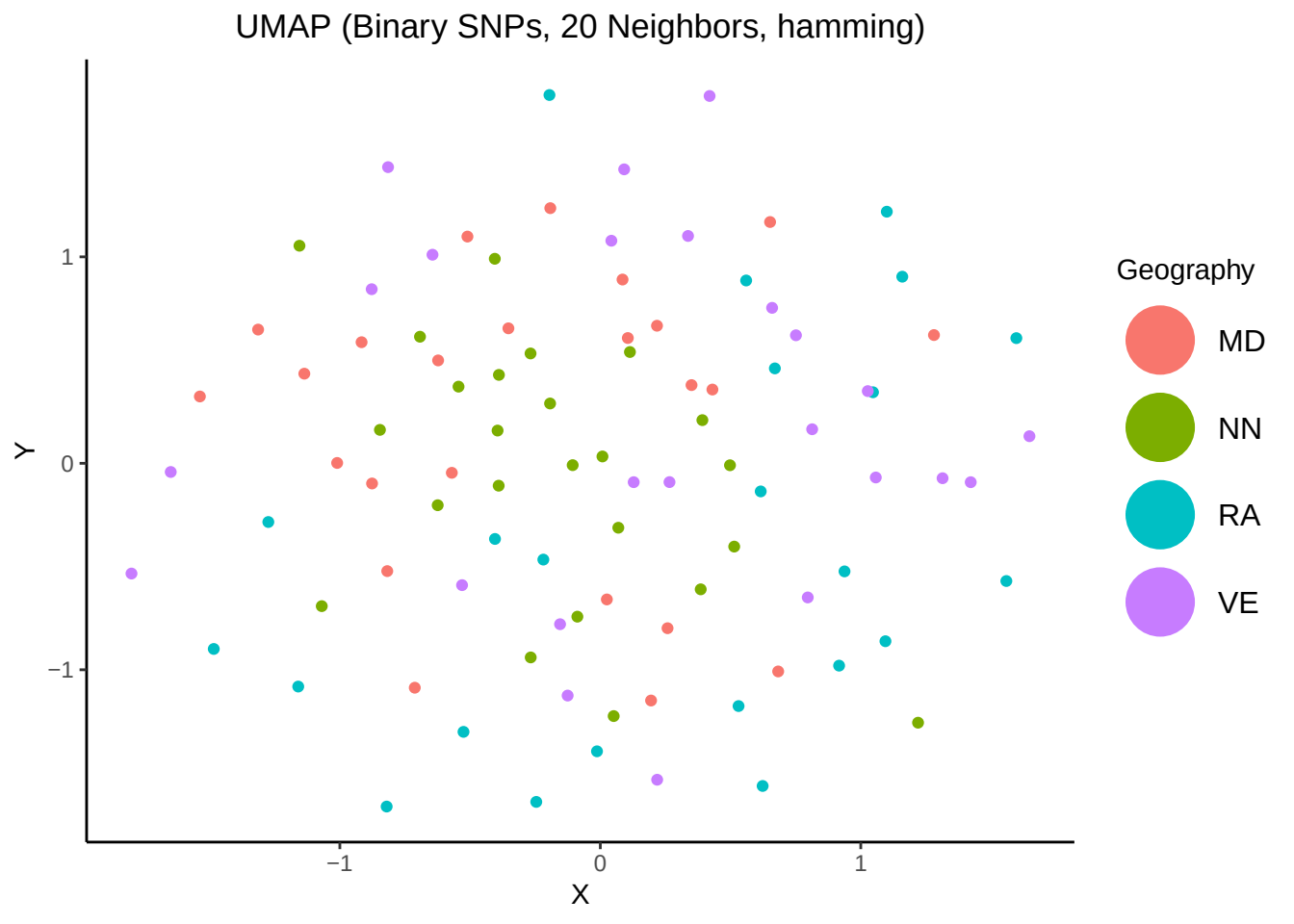
P11
P12

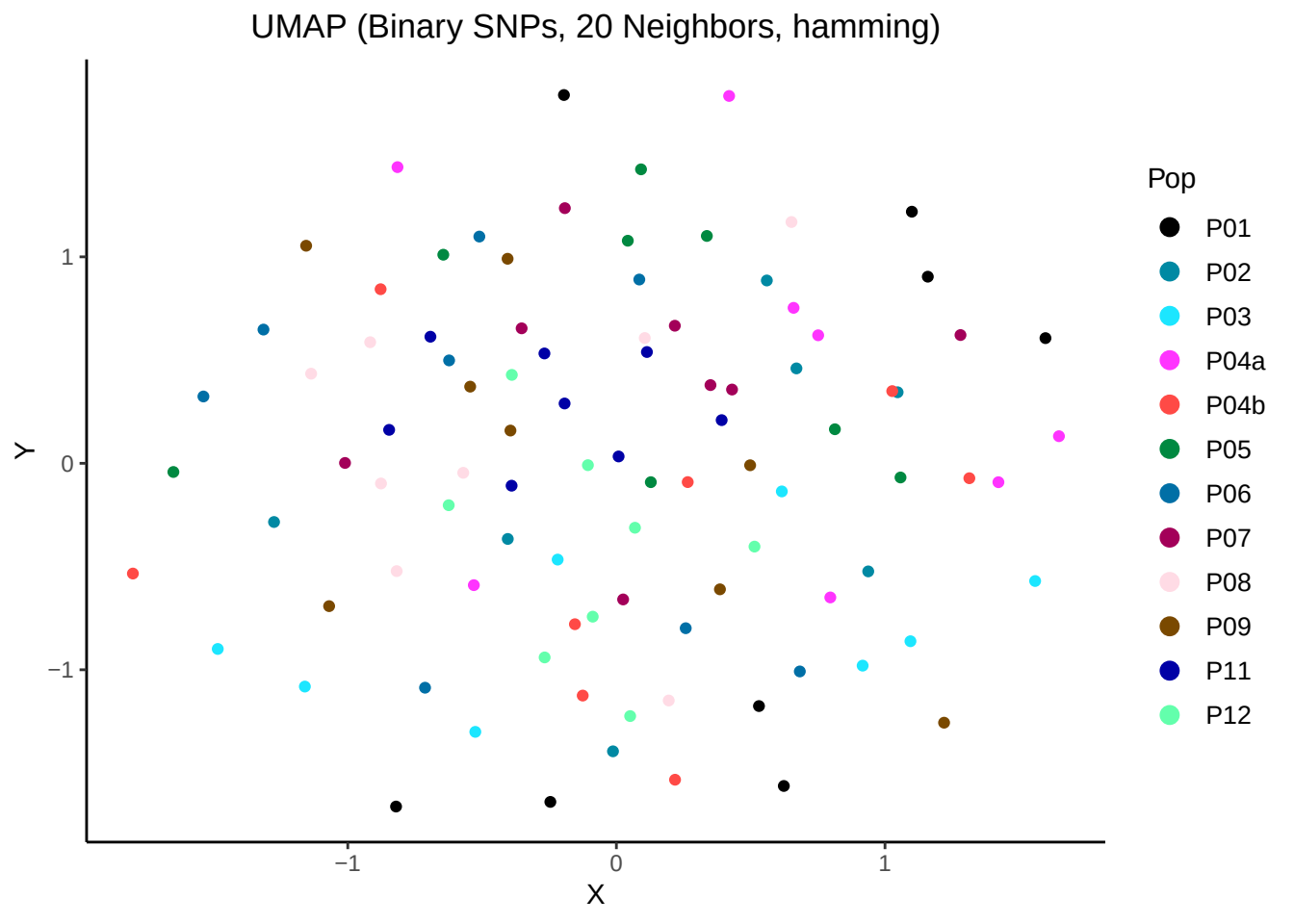

UMAP (Binary SNPs, 20 Neighbors, cosine)
Y
X
1
0
−1
−2
−1
0
1
Sex
F
M

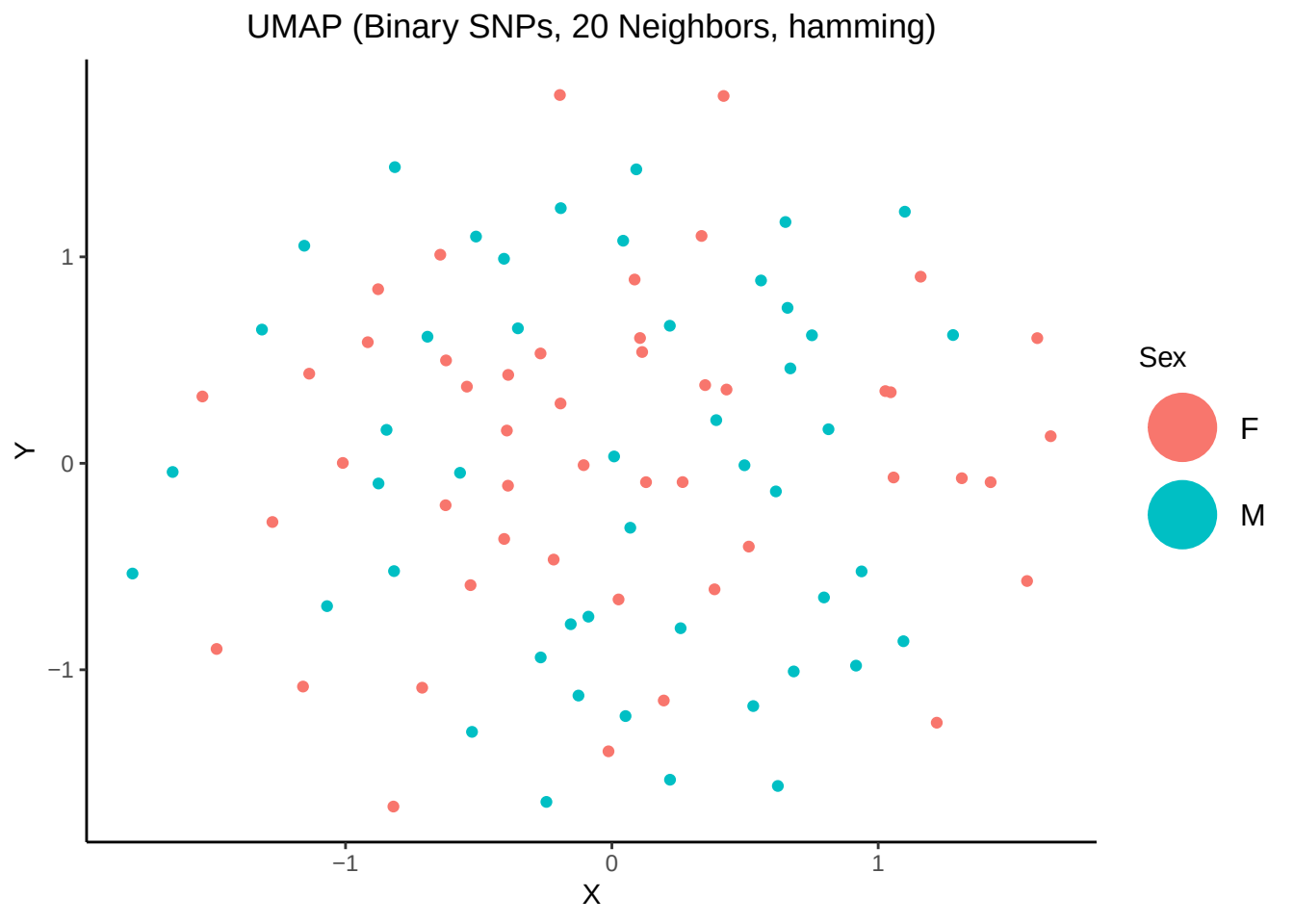

UMAP (Binary SNPs, 20 Neighbors, euclidean)
Y
X
1
0
−1
−2
−1
0
1
Geography
MD
NN
RA
VE

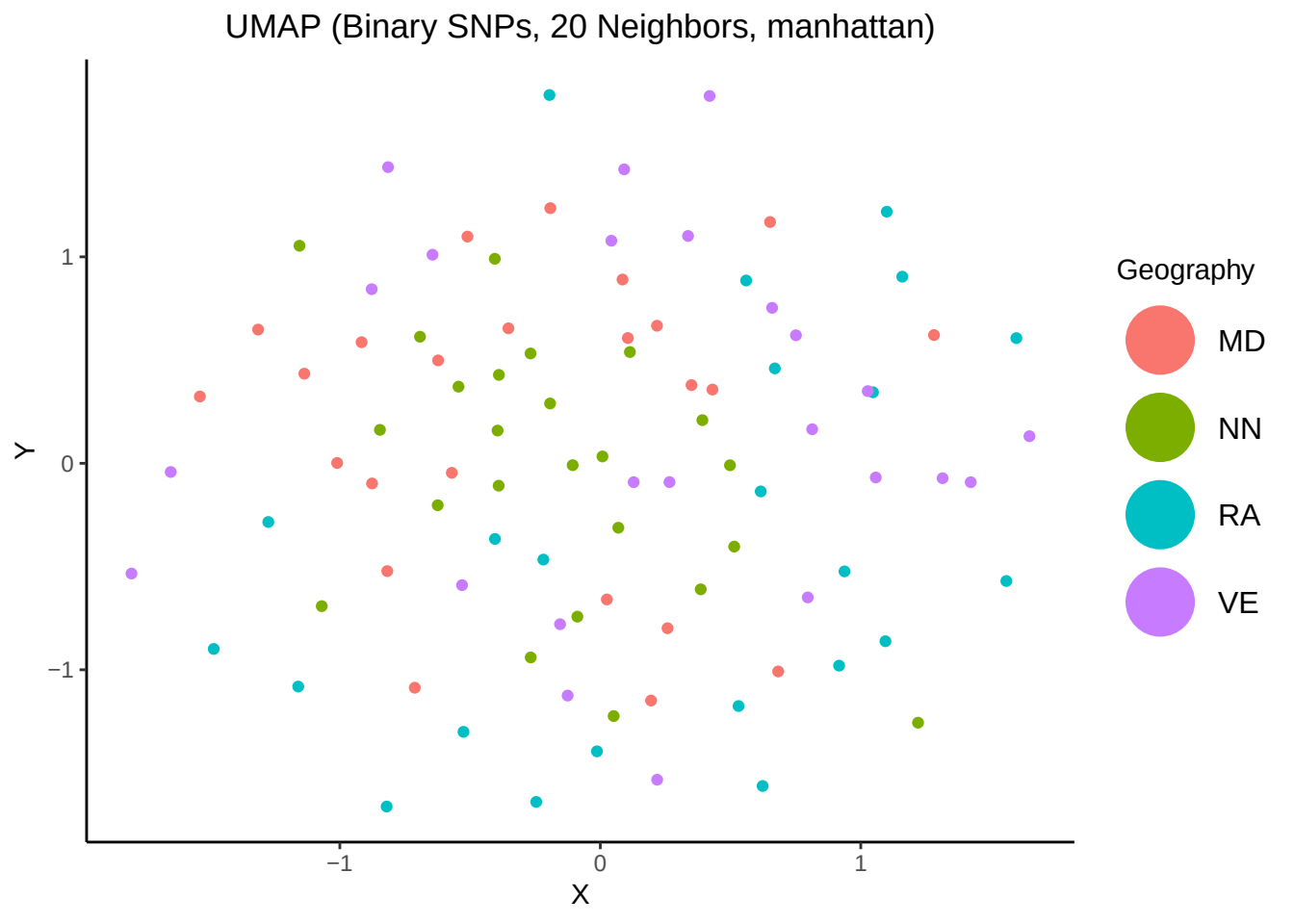

UMAP (Binary SNPs, 20 Neighbors, euclidean)
Y
X
1
0
−1
−2
−1
0
1
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

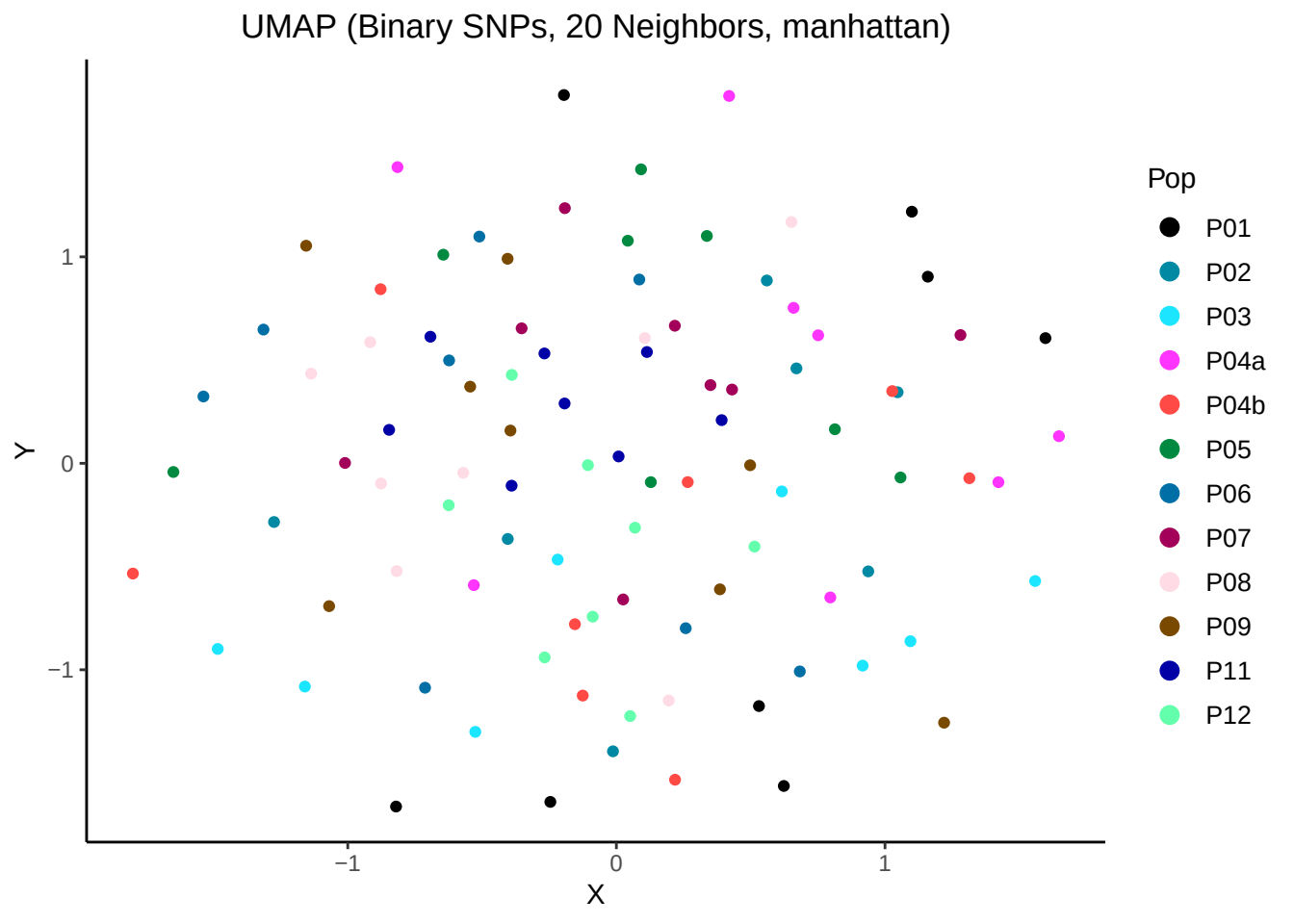

UMAP (Binary SNPs, 20 Neighbors, euclidean)
Y
X
1
0
−1
−2
−1
0
1
Sex
F
M

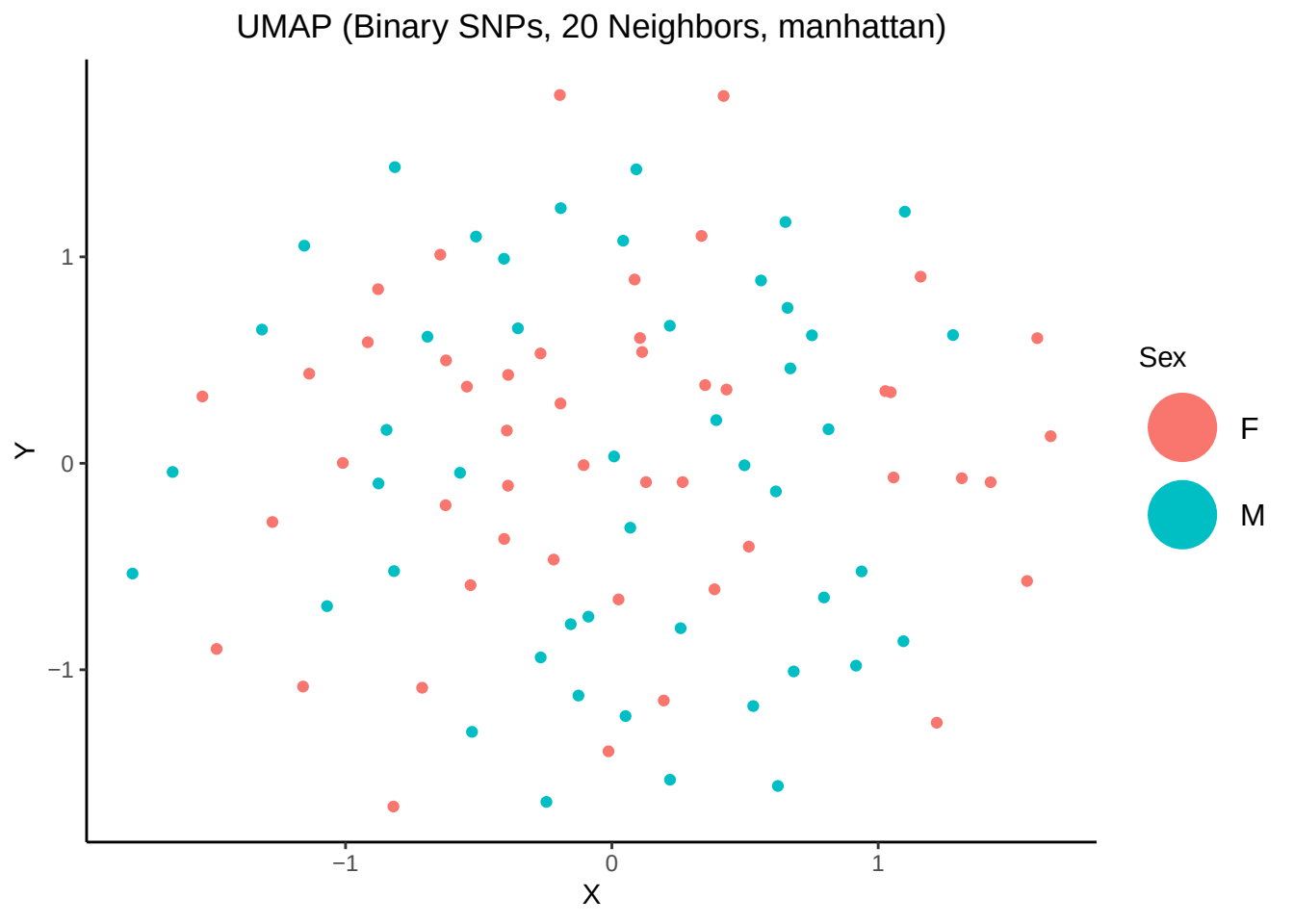

UMAP (Binary SNPs, 20 Neighbors, hamming)
Y
X
1
0
−1
−1
0
1
Geography
MD
NN
RA
VE

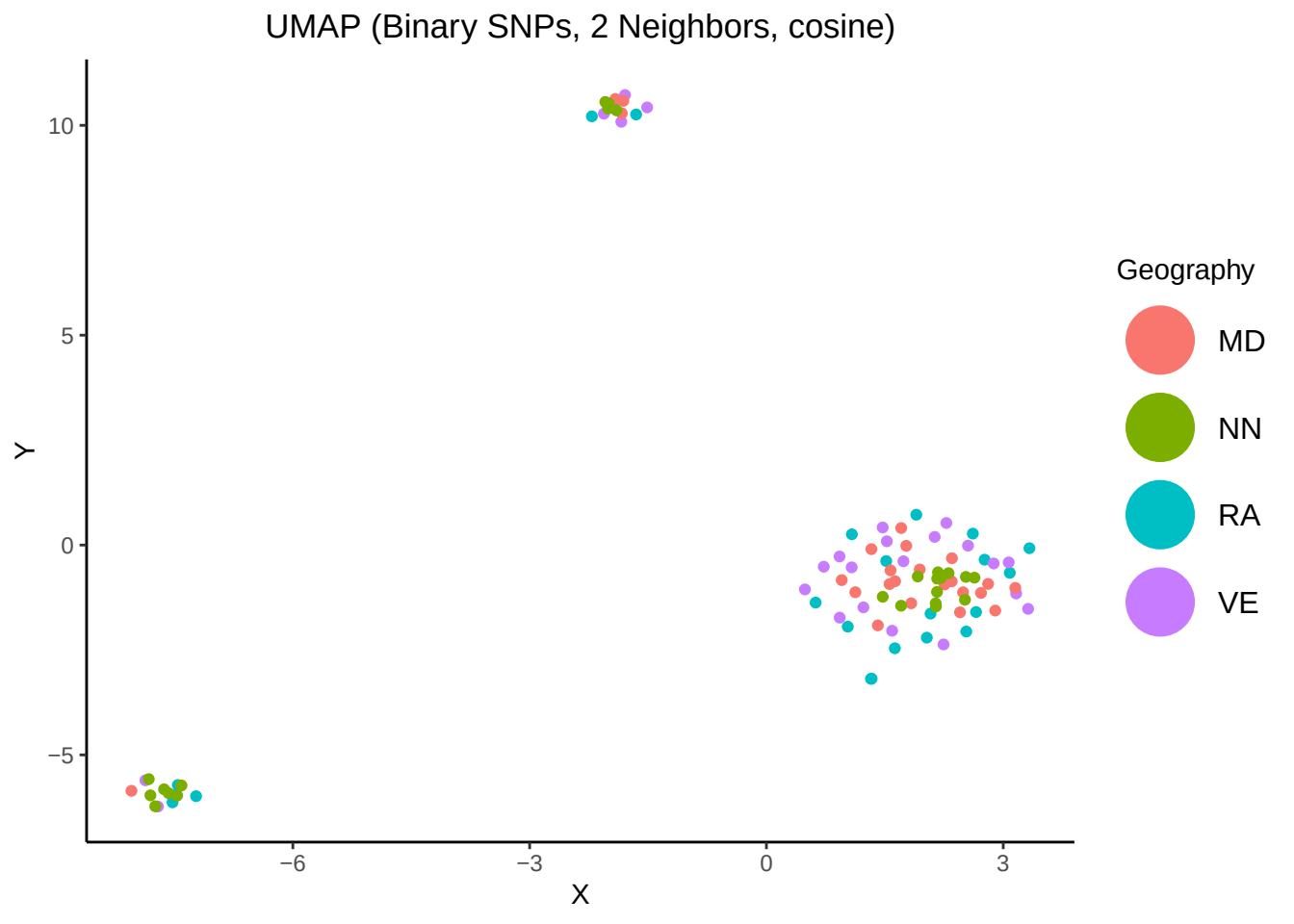

UMAP (Binary SNPs, 20 Neighbors, hamming)
Y
X
1
0
−1
−1
0
1
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

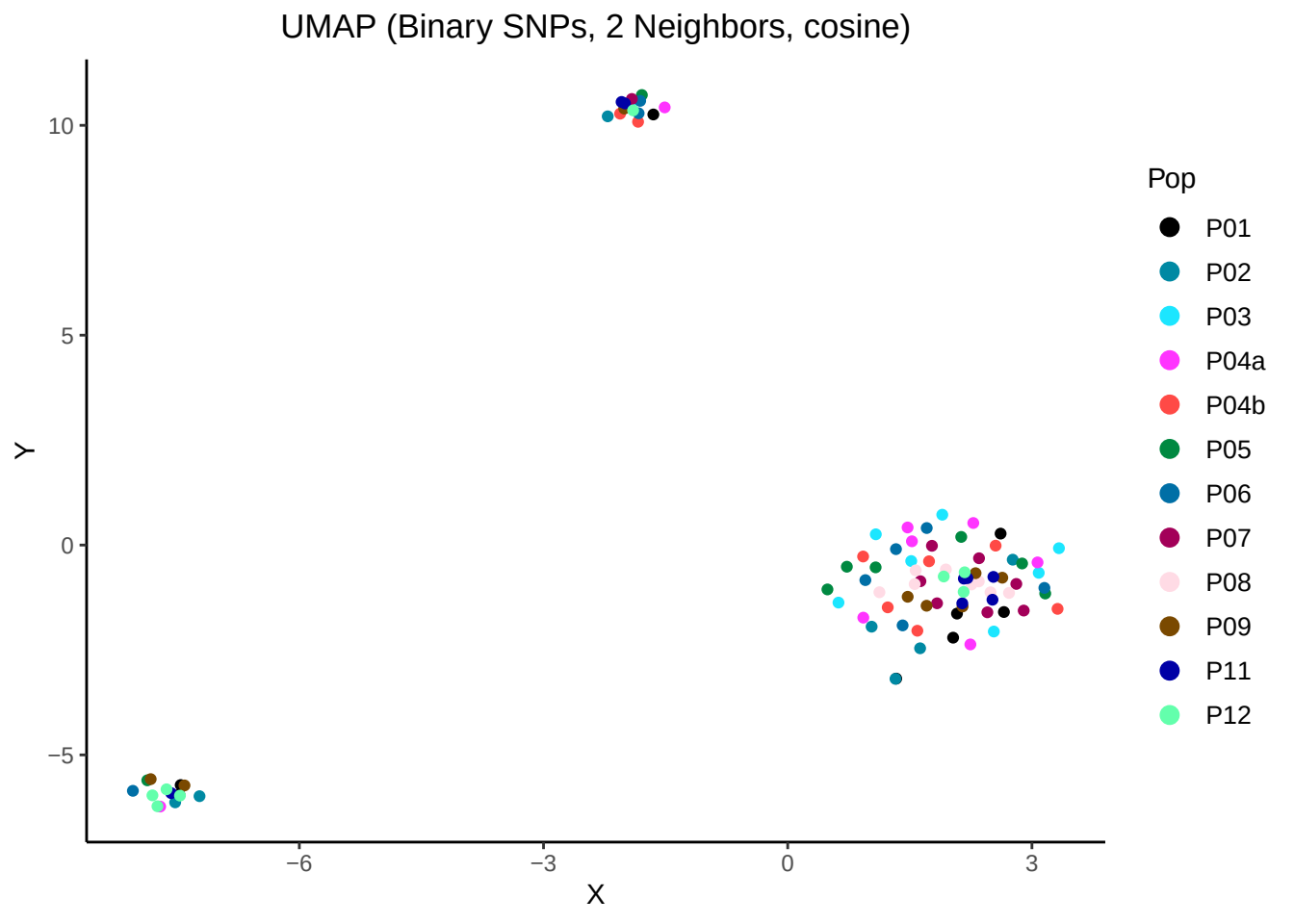

UMAP (Binary SNPs, 20 Neighbors, hamming)
Y
X
1
0
−1
−1
0
1
Sex
F
M

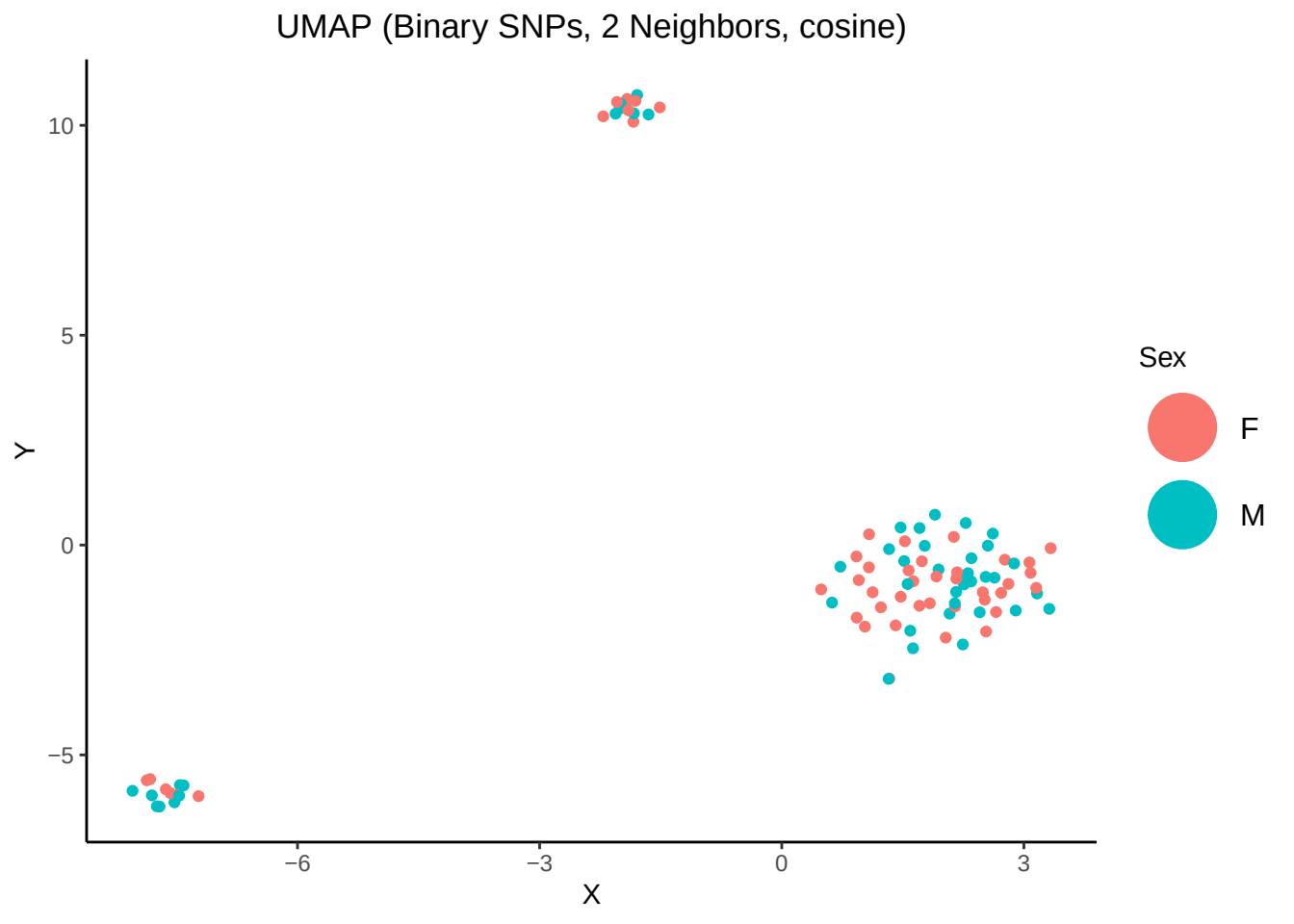

UMAP (Binary SNPs, 20 Neighbors, manhattan)
Y
X
1
0
−1
−1
0
1
Geography
MD
NN
RA
VE

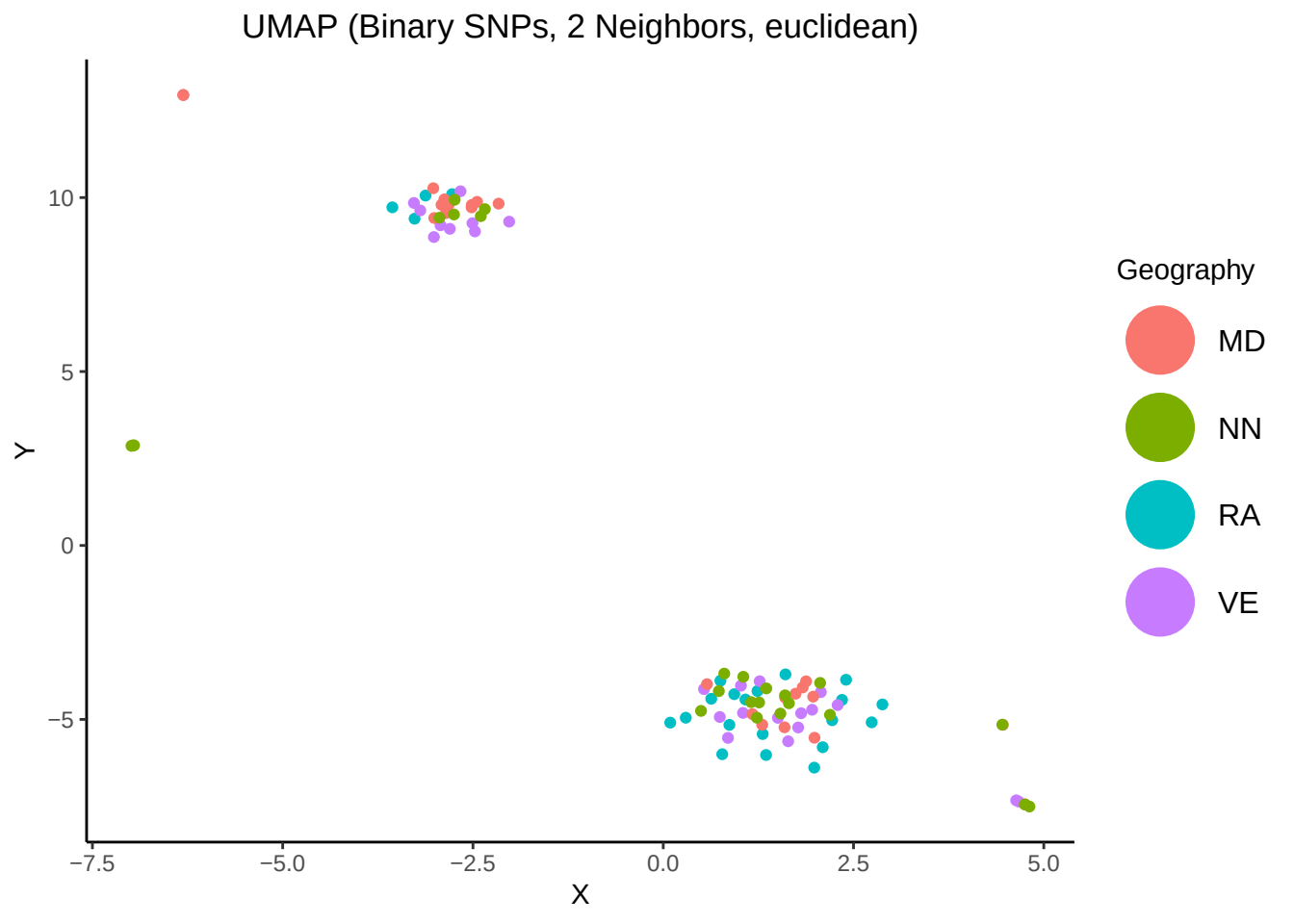

UMAP (Binary SNPs, 20 Neighbors, manhattan)
Y
X
1
0
−1
−1
0
1
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

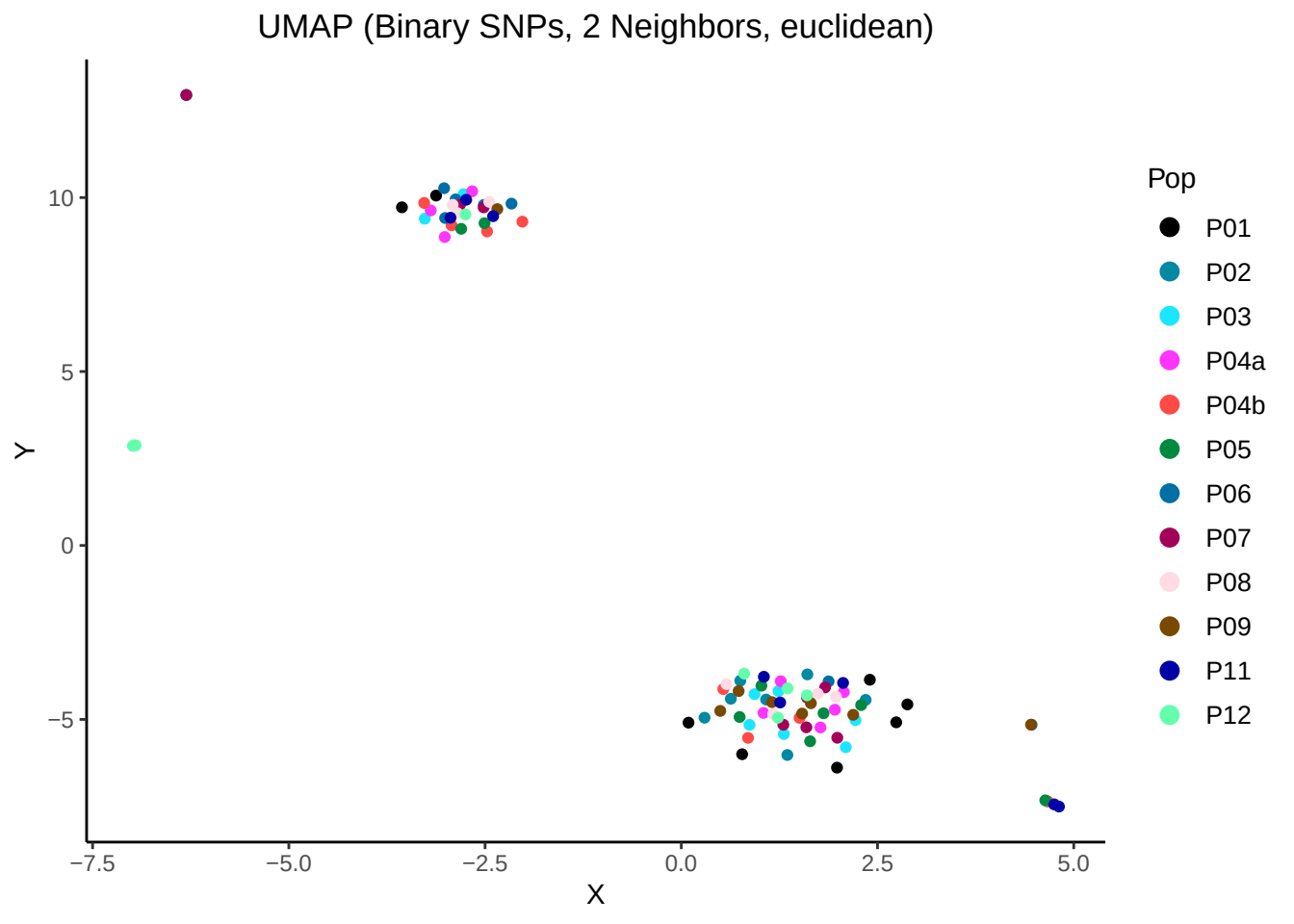

UMAP (Binary SNPs, 20 Neighbors, manhattan)
Y
X
1
0
−1
−1
0
1
Sex
F
M

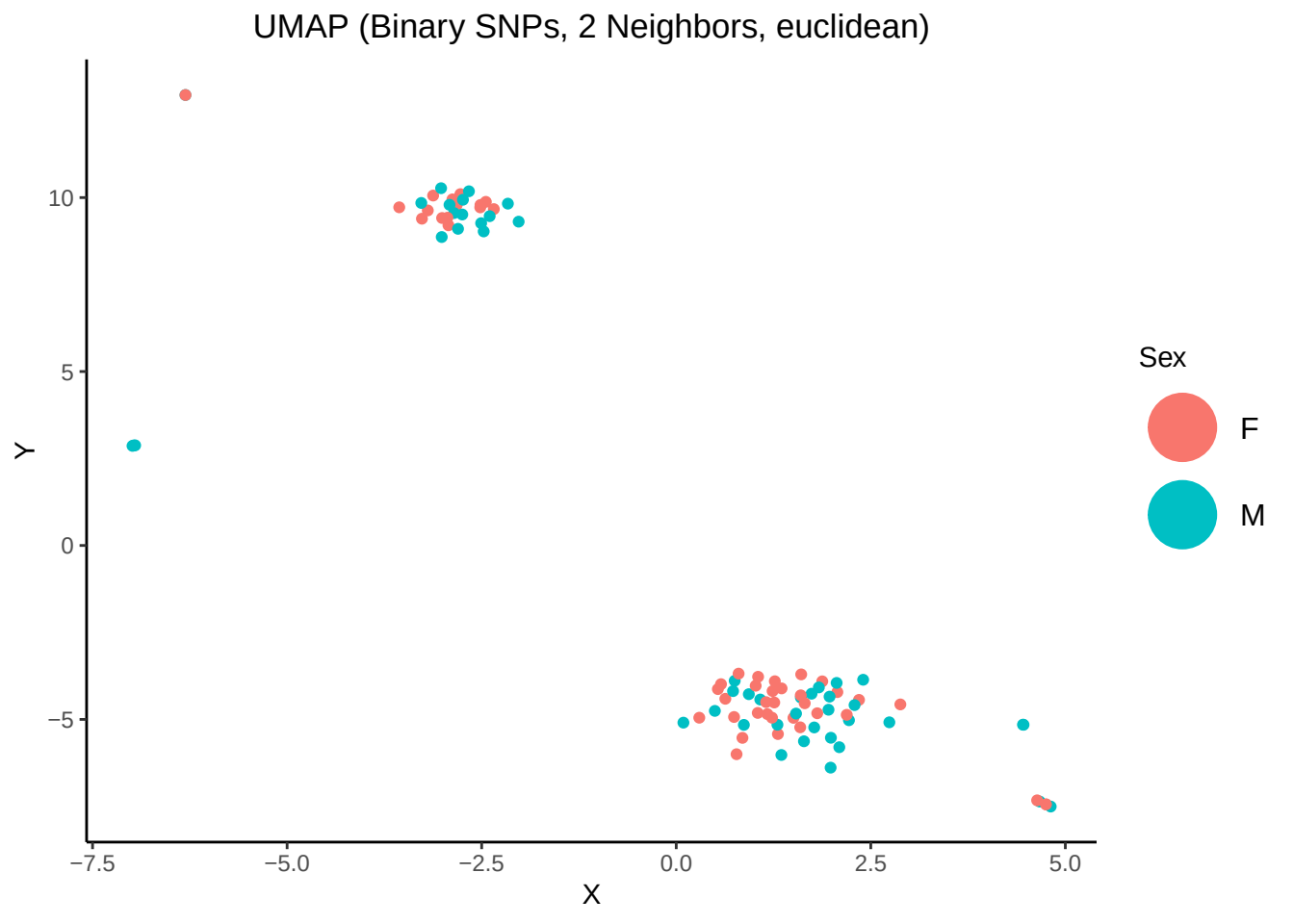

UMAP (Binary SNPs, 2 Neighbors, cosine)
10
5
0
−5
Y
−6
−3
0
3
X
Geography
MD
NN
RA
VE

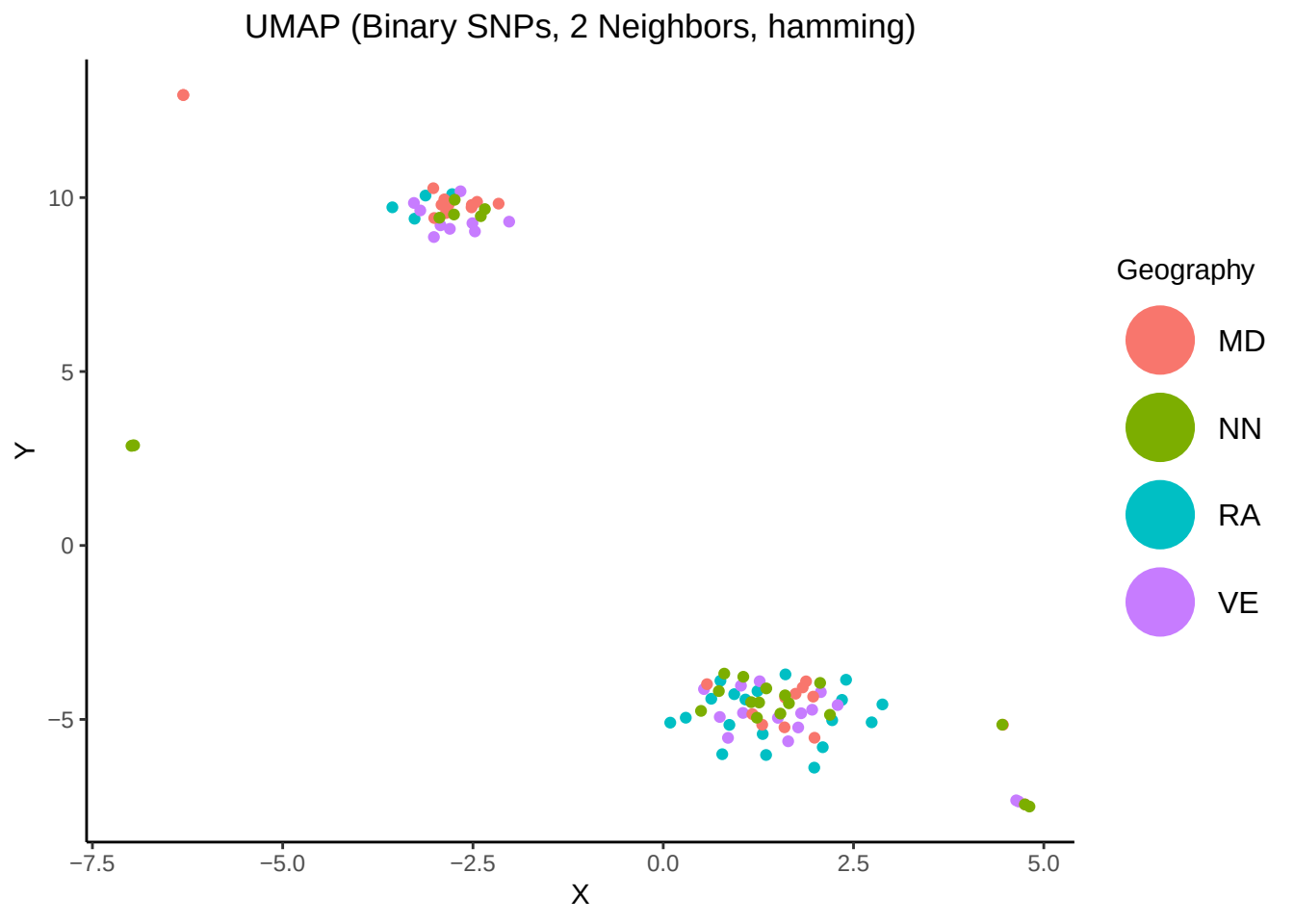

UMAP (Binary SNPs, 2 Neighbors, cosine)
10
5
0
−5
Y
−6
−3
0
3
X
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

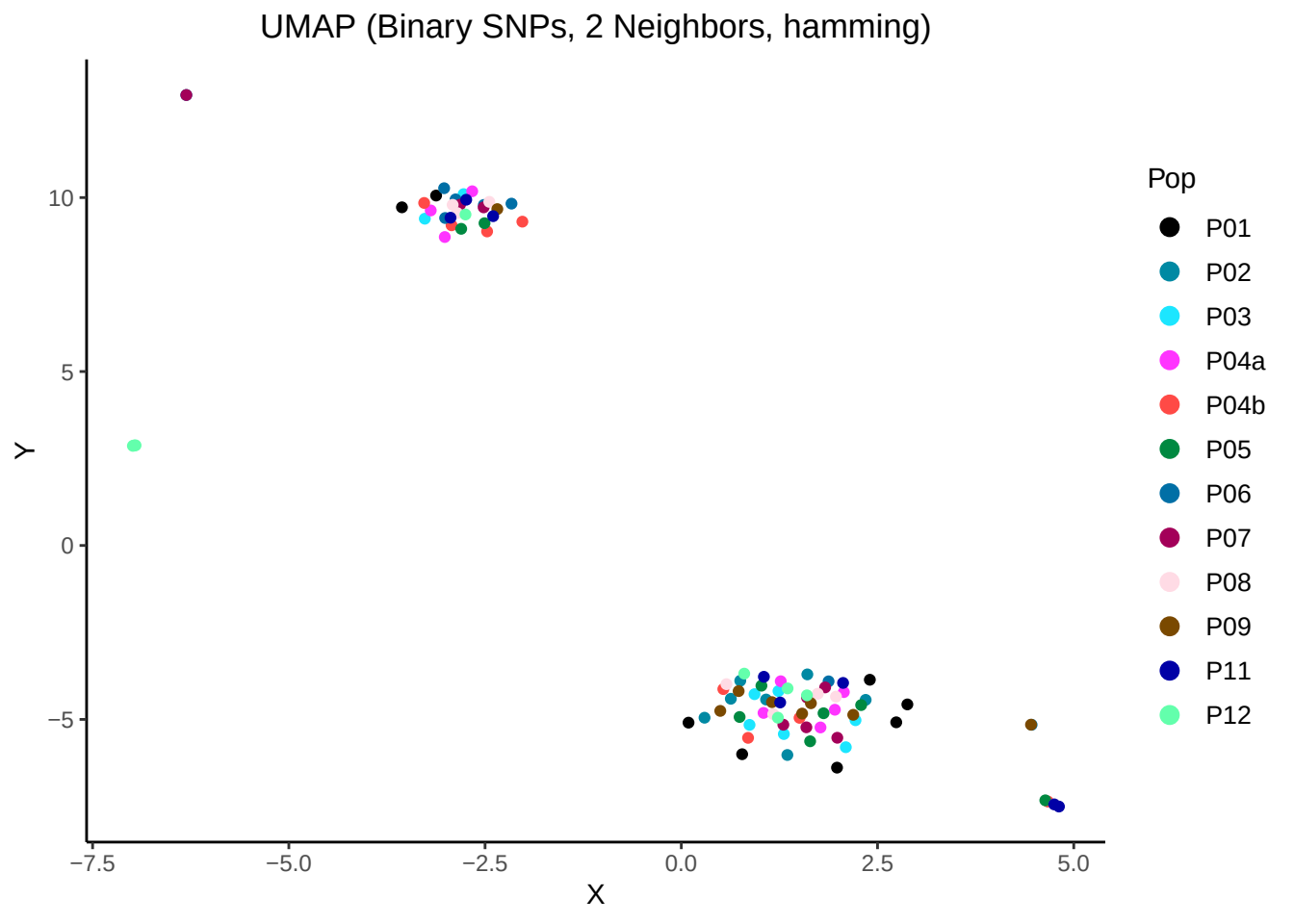

UMAP (Binary SNPs, 2 Neighbors, cosine)
10
5
0
−5
Y
−6
−3
0
3
X
Sex
F
M

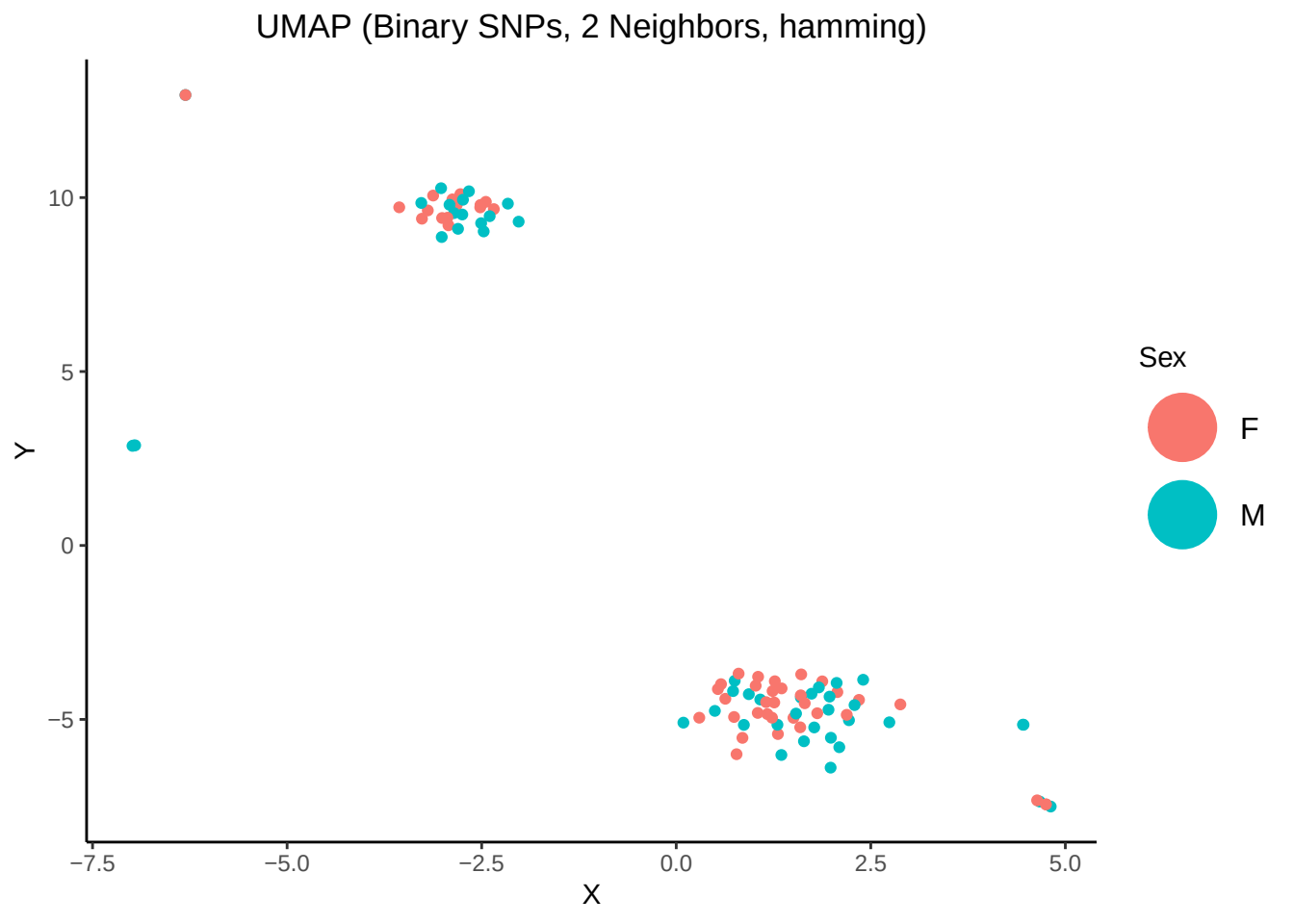

UMAP (Binary SNPs, 2 Neighbors, euclidean)
10
5
0
−5
Y
−7.5
−5.0
−2.5
0.0
2.5
5.0
X
Geography
MD
NN
RA
VE

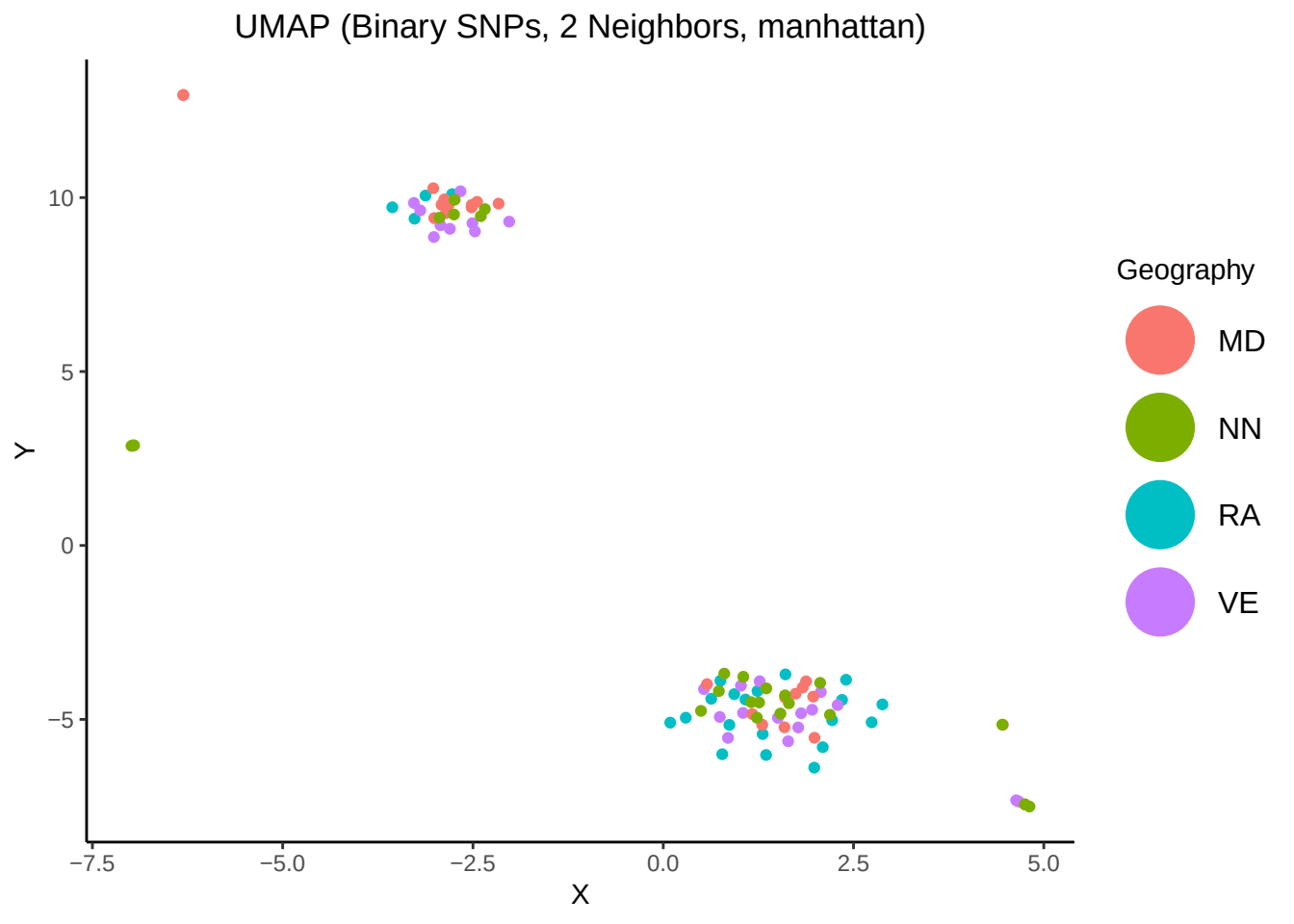

UMAP (Binary SNPs, 2 Neighbors, euclidean)
Y
X
10
5
0
−5
−7.5
−5.0
−2.5
0.0
2.5
5.0
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

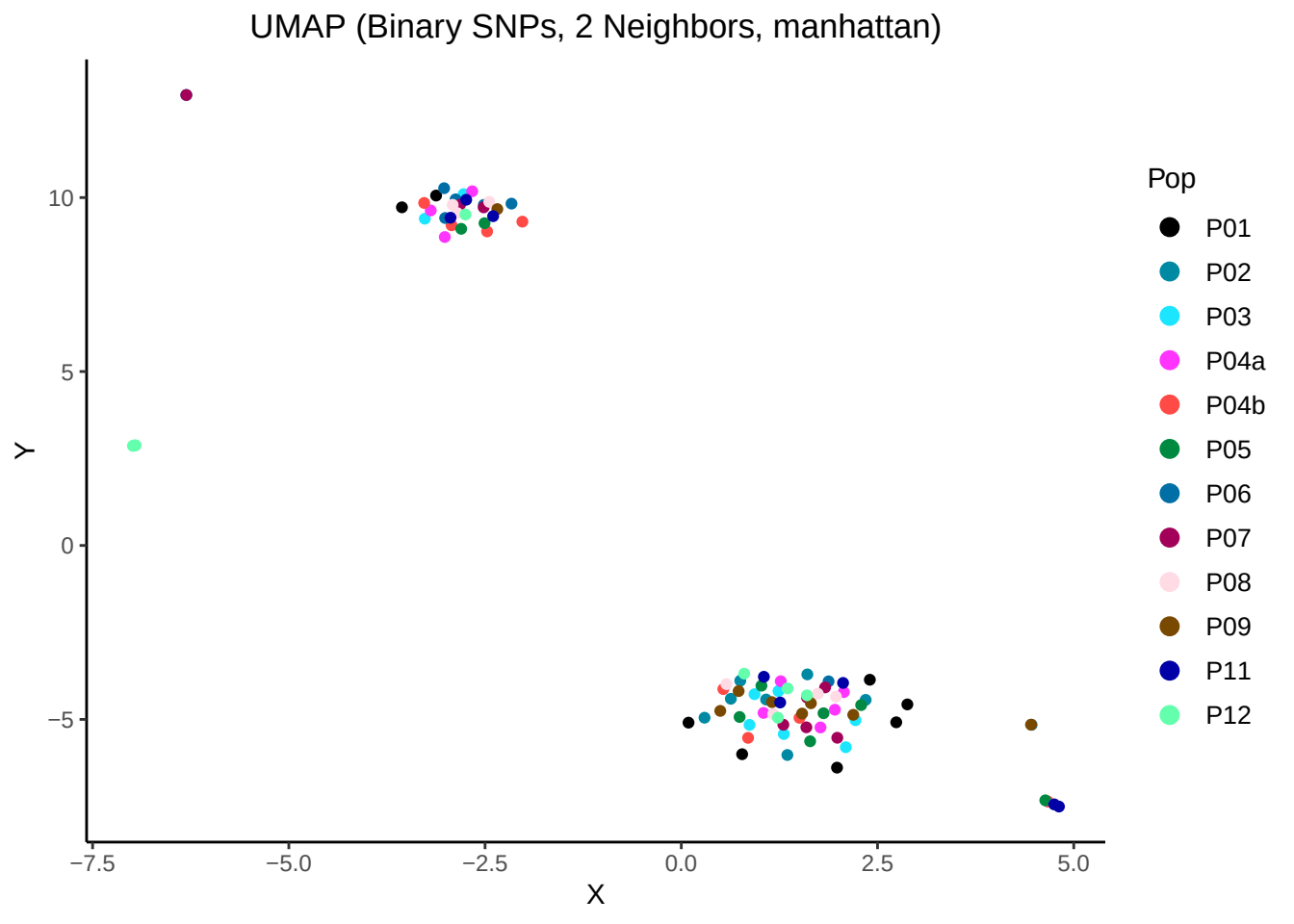

UMAP (Binary SNPs, 2 Neighbors, euclidean)
10
5
0
−5
Y
−7.5
−5.0
−2.5
0.0
2.5
5.0
X
Sex
F
M

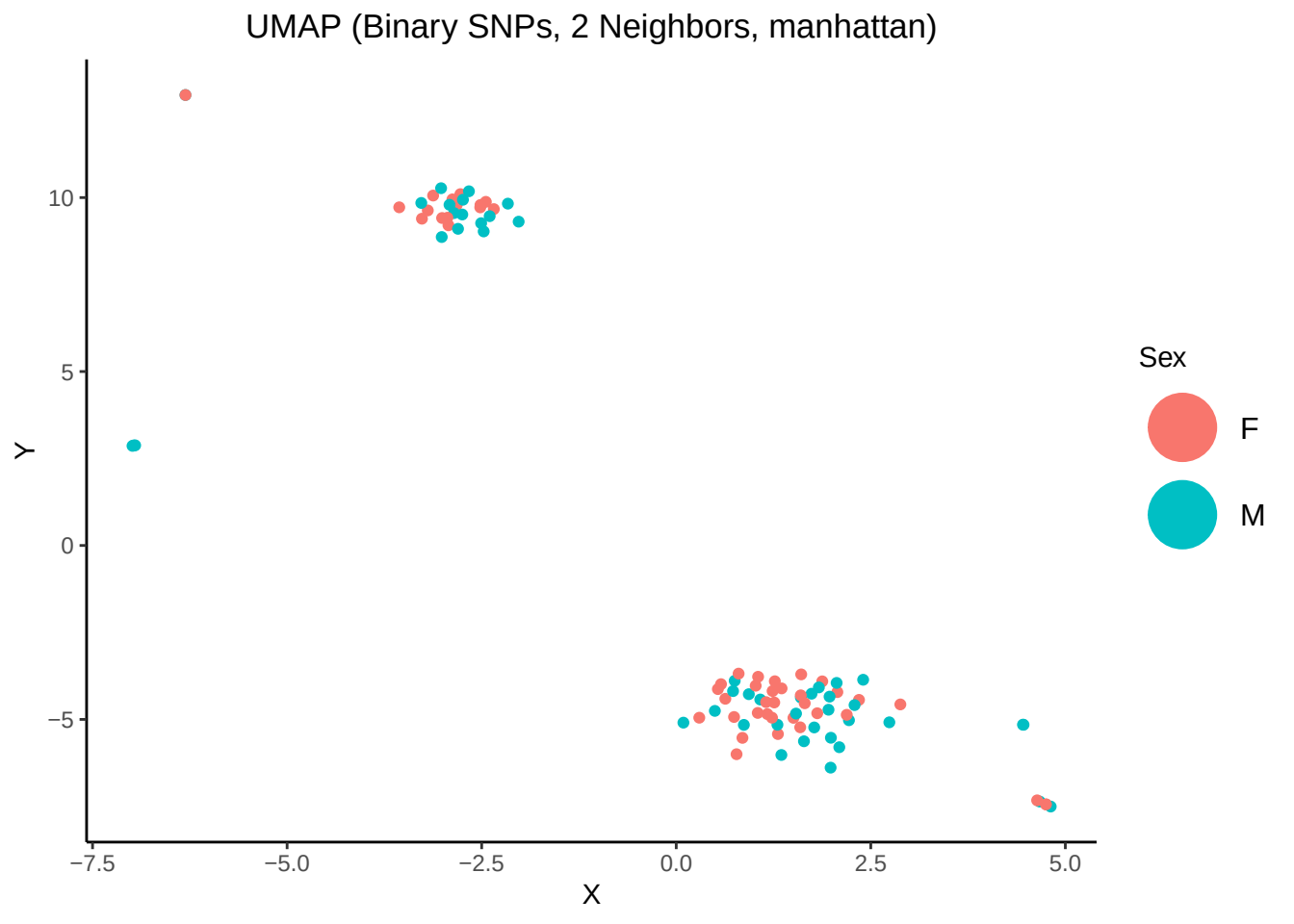

UMAP (Binary SNPs, 2 Neighbors, hamming)
Y
X
10
5
0
−5
−7.5
−5.0
−2.5
0.0
2.5
5.0
Geography
MD
NN
RA
VE

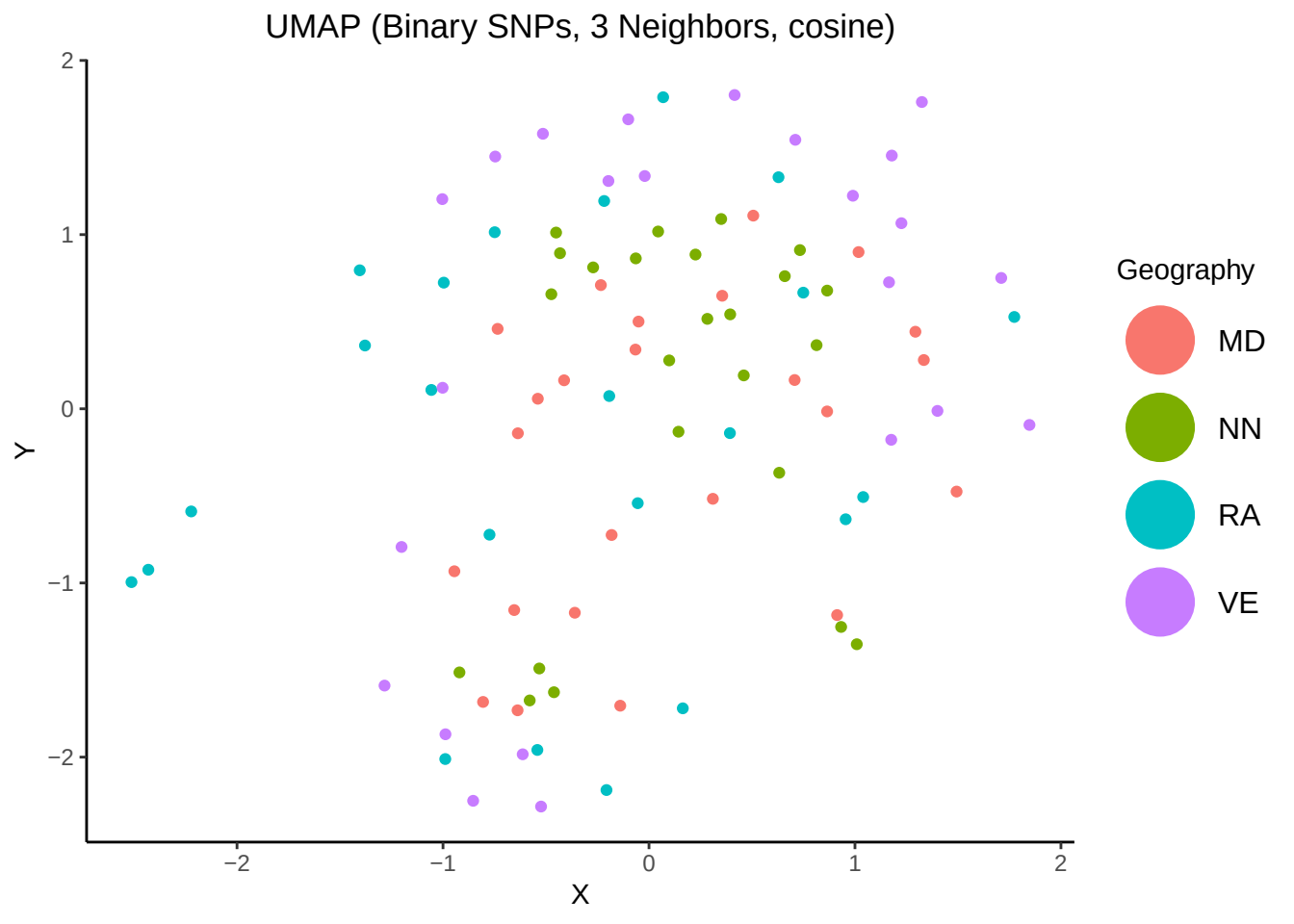

UMAP (Binary SNPs, 2 Neighbors, hamming)
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12
10
5
0
−5
Y
−7.5
−5.0
−2.5
0.0
2.5
5.0
X

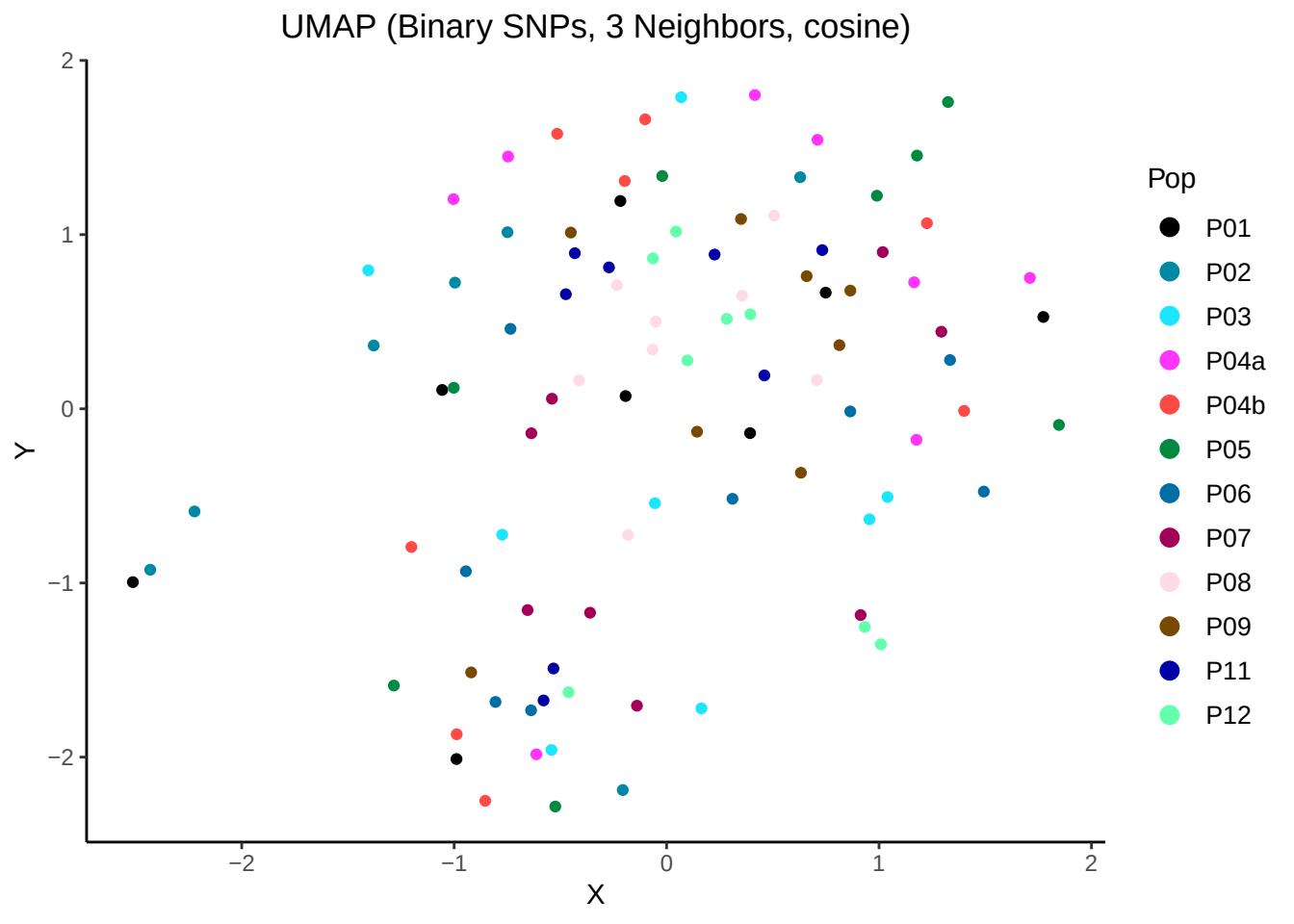

UMAP (Binary SNPs, 2 Neighbors, hamming)
10
5
0
−5
Y
−7.5
−5.0
−2.5
0.0
2.5
5.0
X
Sex
F
M

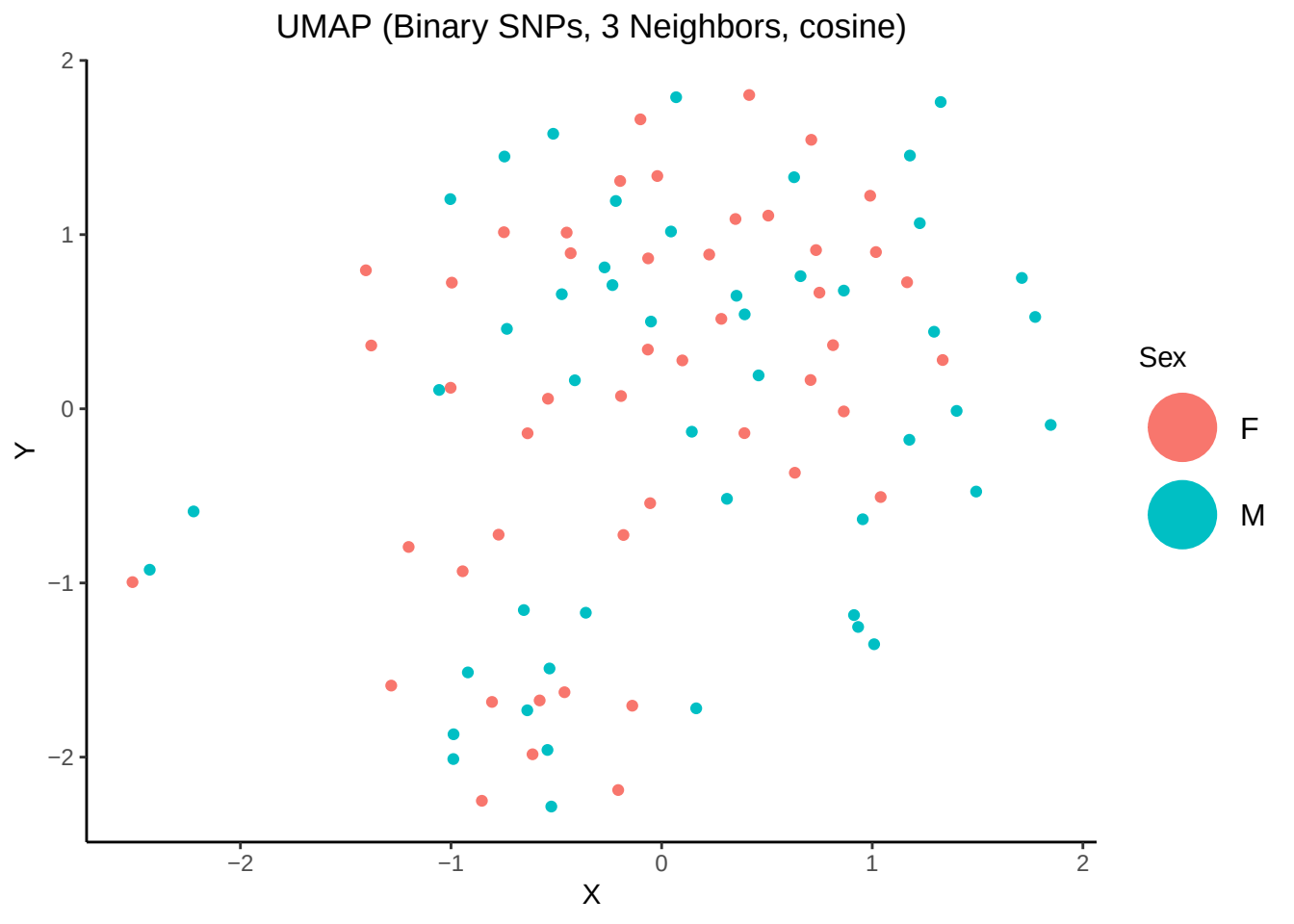

UMAP (Binary SNPs, 2 Neighbors, manhattan)
Y
X
10
5
0
−5
−7.5
−5.0
−2.5
0.0
2.5
5.0
Geography
MD
NN
RA
VE

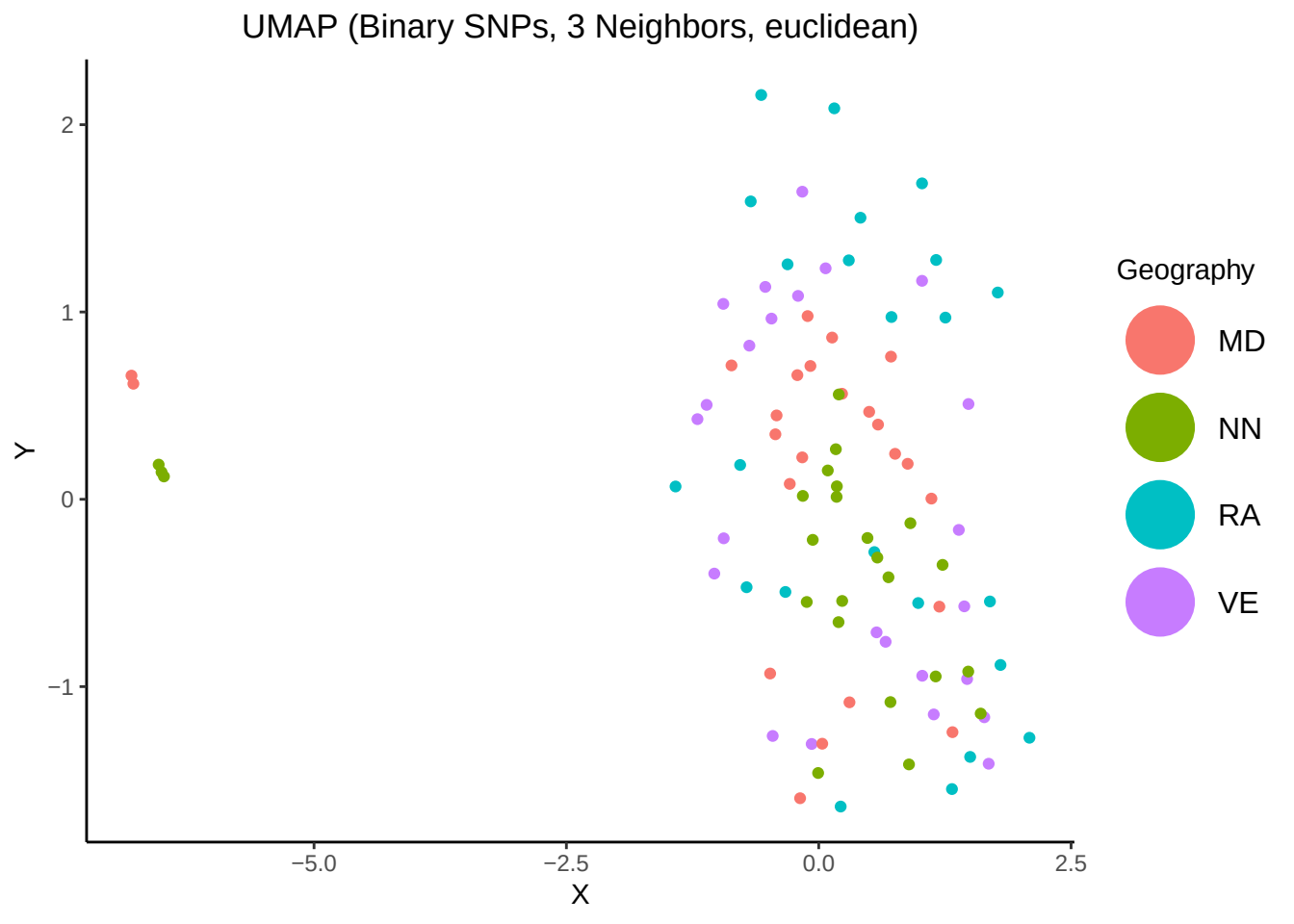

UMAP (Binary SNPs, 2 Neighbors, manhattan)
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12
10
5
0
−5
Y
−7.5
−5.0
−2.5
0.0
2.5
5.0
X

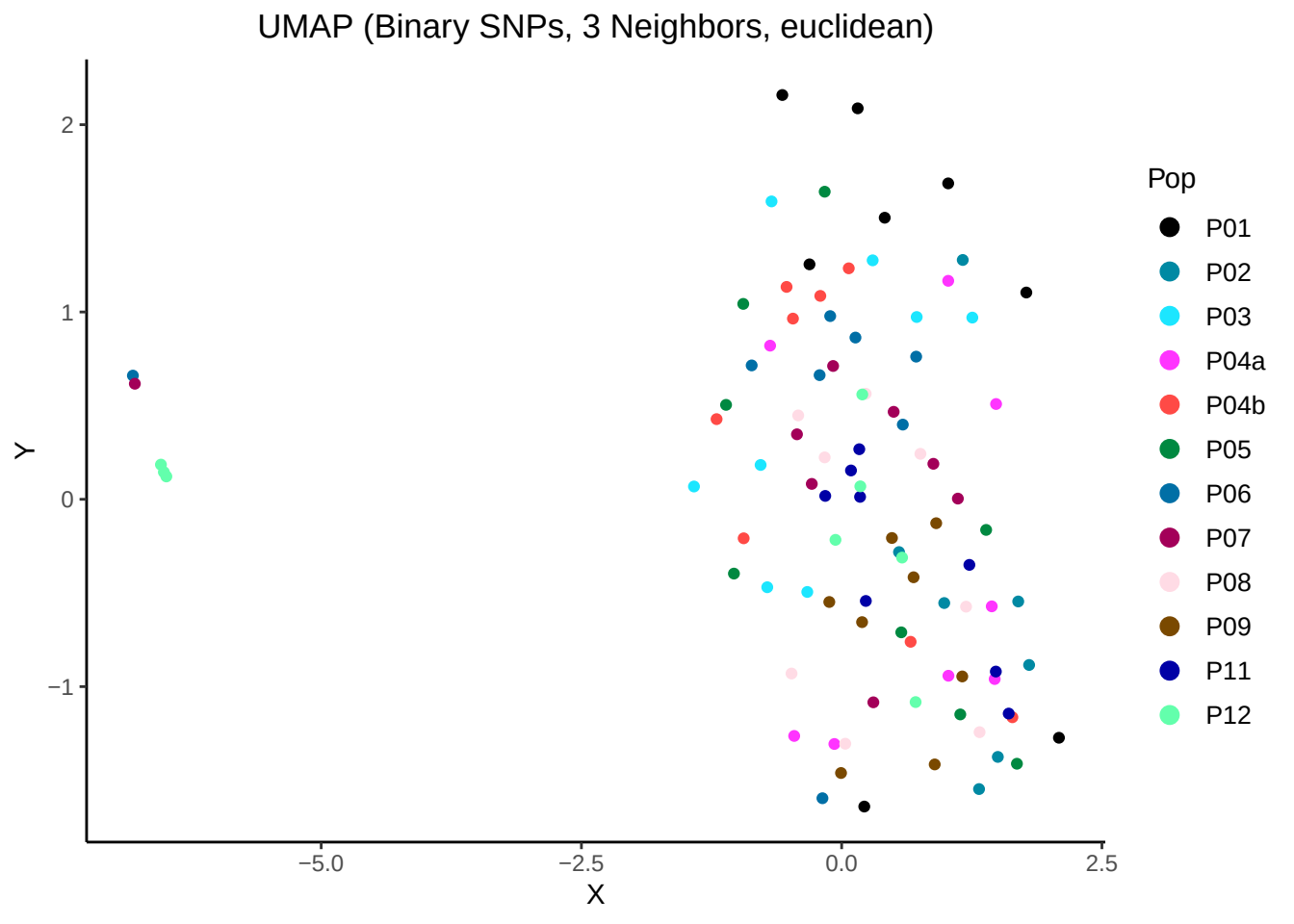

UMAP (Binary SNPs, 2 Neighbors, manhattan)
Y
X
10
5
0
−5
−7.5
−5.0
−2.5
0.0
2.5
5.0
Sex
F
M

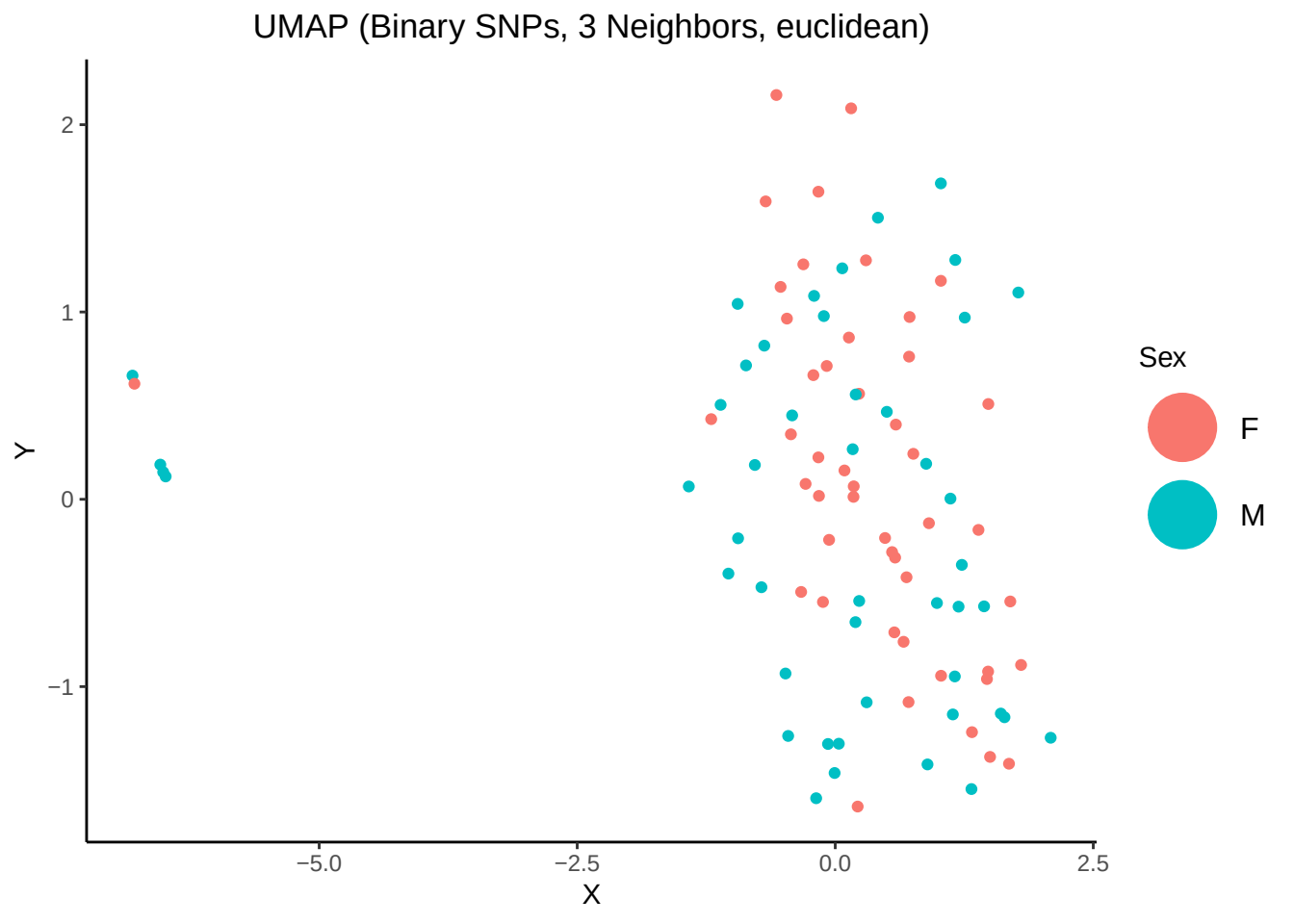

UMAP (Binary SNPs, 3 Neighbors, cosine)
Y
X
2
1
0
−1
−2
−2
−1
0
1
2
Geography
MD
NN
RA
VE

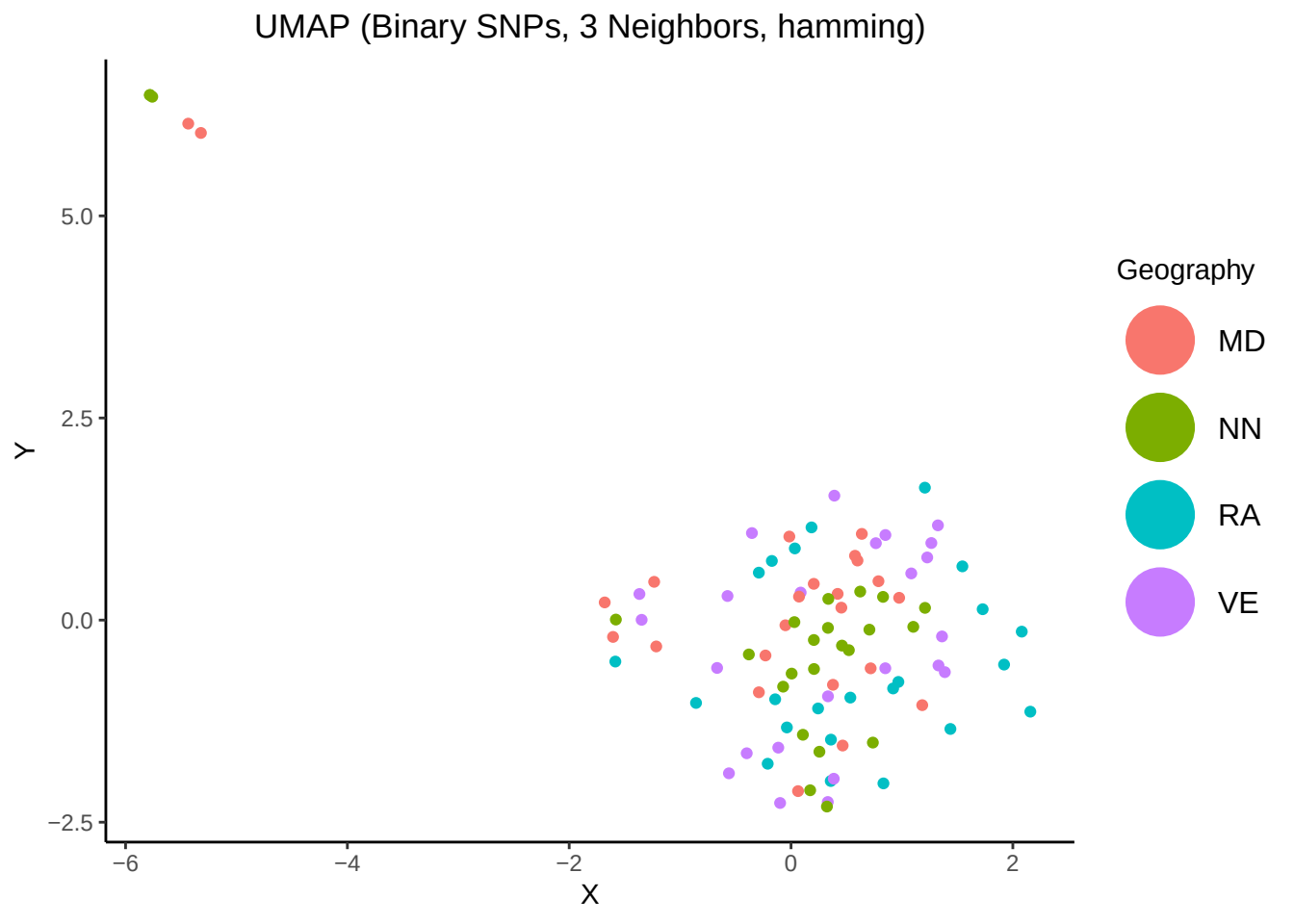

UMAP (Binary SNPs, 3 Neighbors, cosine)
Y
X
2
1
0
−1
−2
−2
−1
0
1
2
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

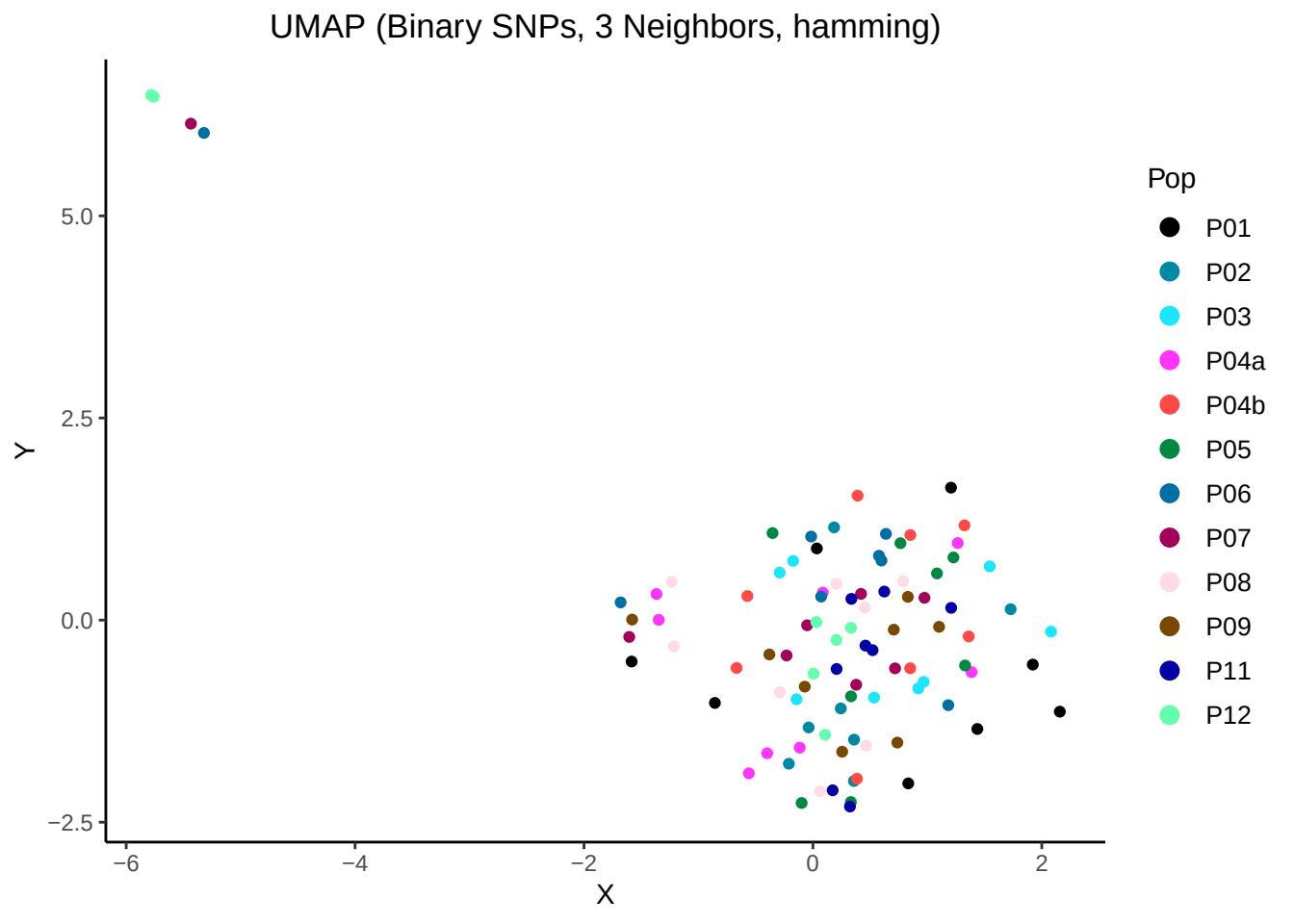

UMAP (Binary SNPs, 3 Neighbors, cosine)
Y
X
2
1
0
−1
−2
−2
−1
0
1
2
Sex
F
M

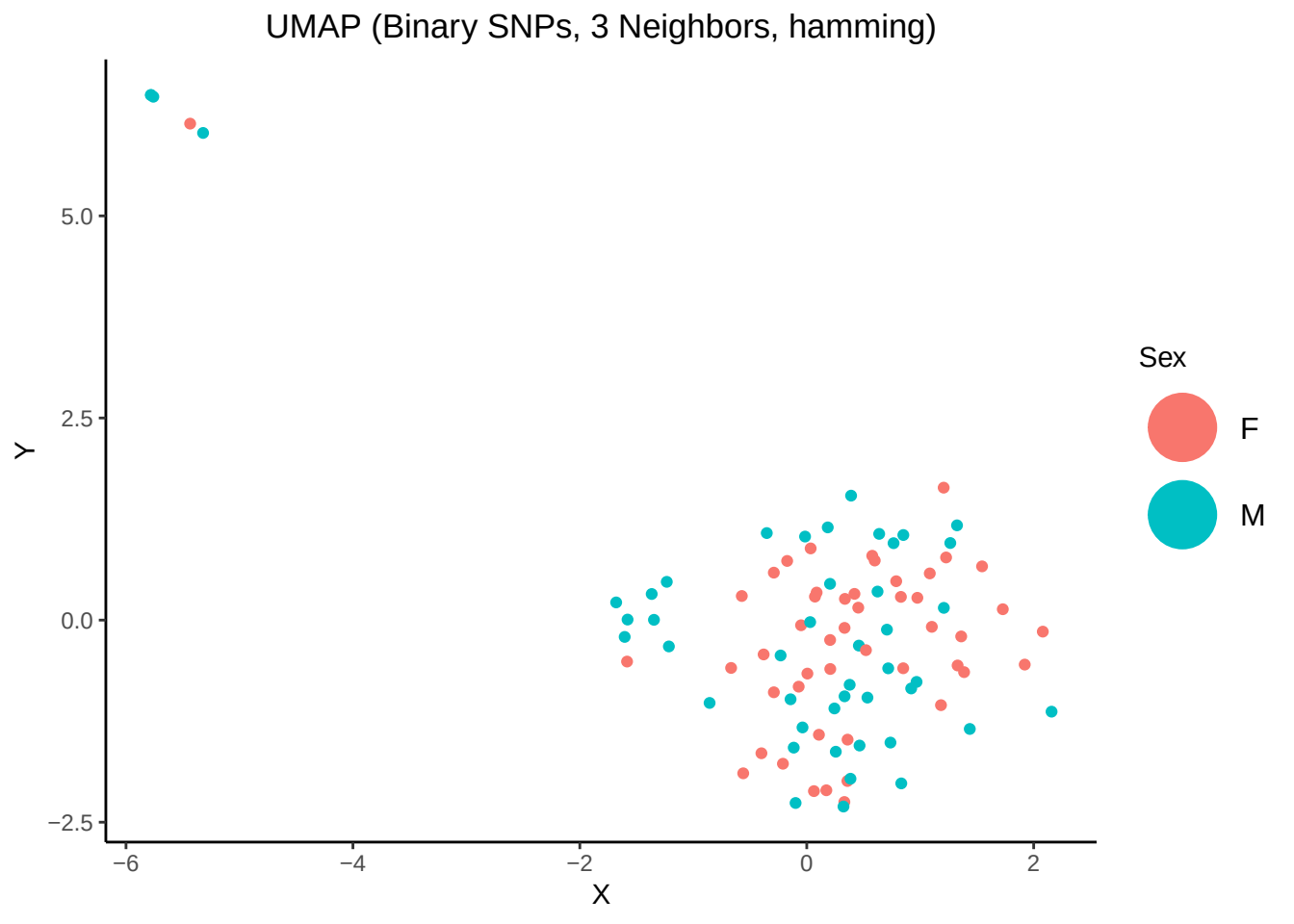

UMAP (Binary SNPs, 3 Neighbors, euclidean)
Y
X
2
1
0
−1
−5.0
−2.5
0.0
2.5
Geography
MD
NN
RA
VE

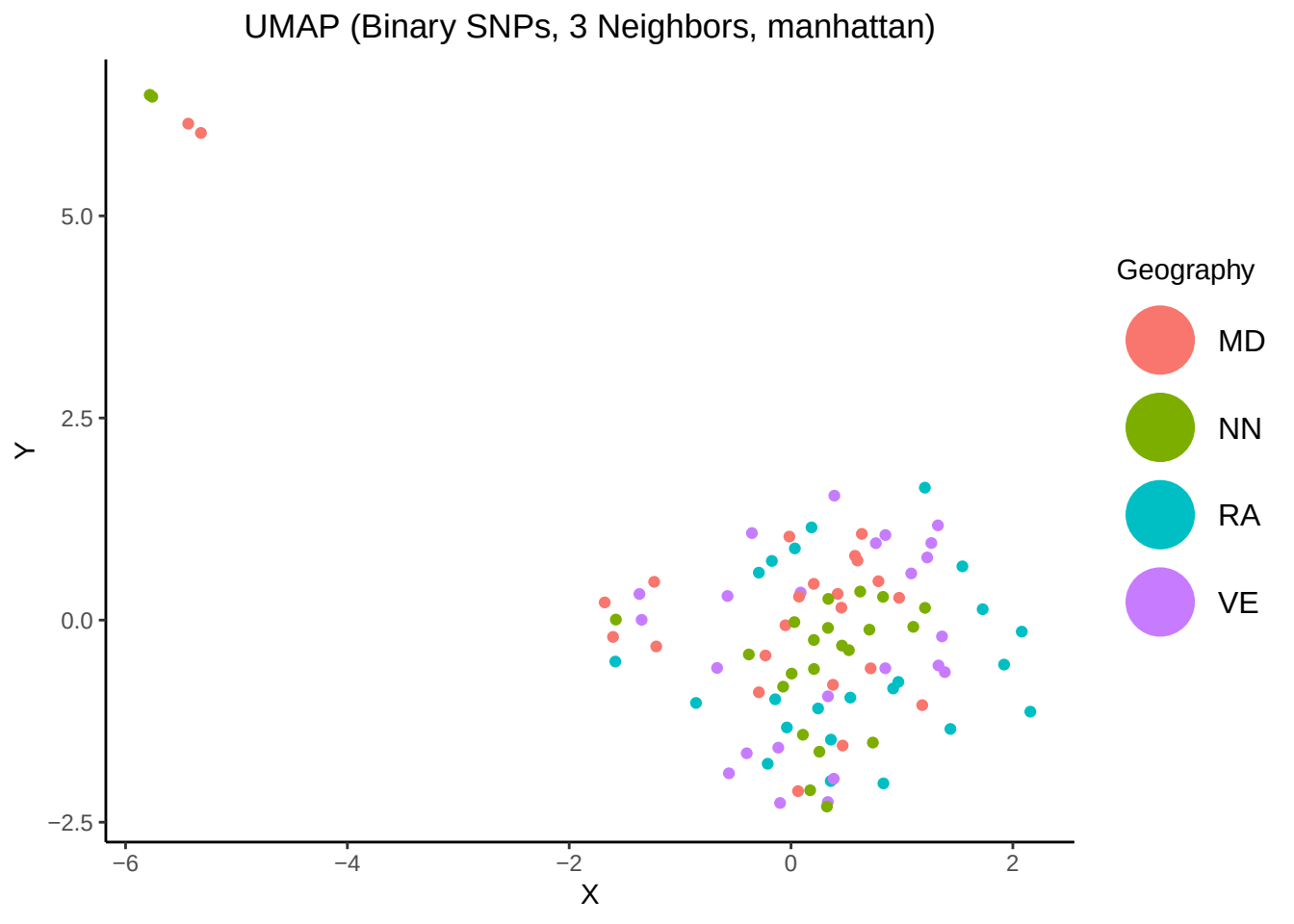

UMAP (Binary SNPs, 3 Neighbors, euclidean)
Y
X
2
1
0
−1
−5.0
−2.5
0.0
2.5
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

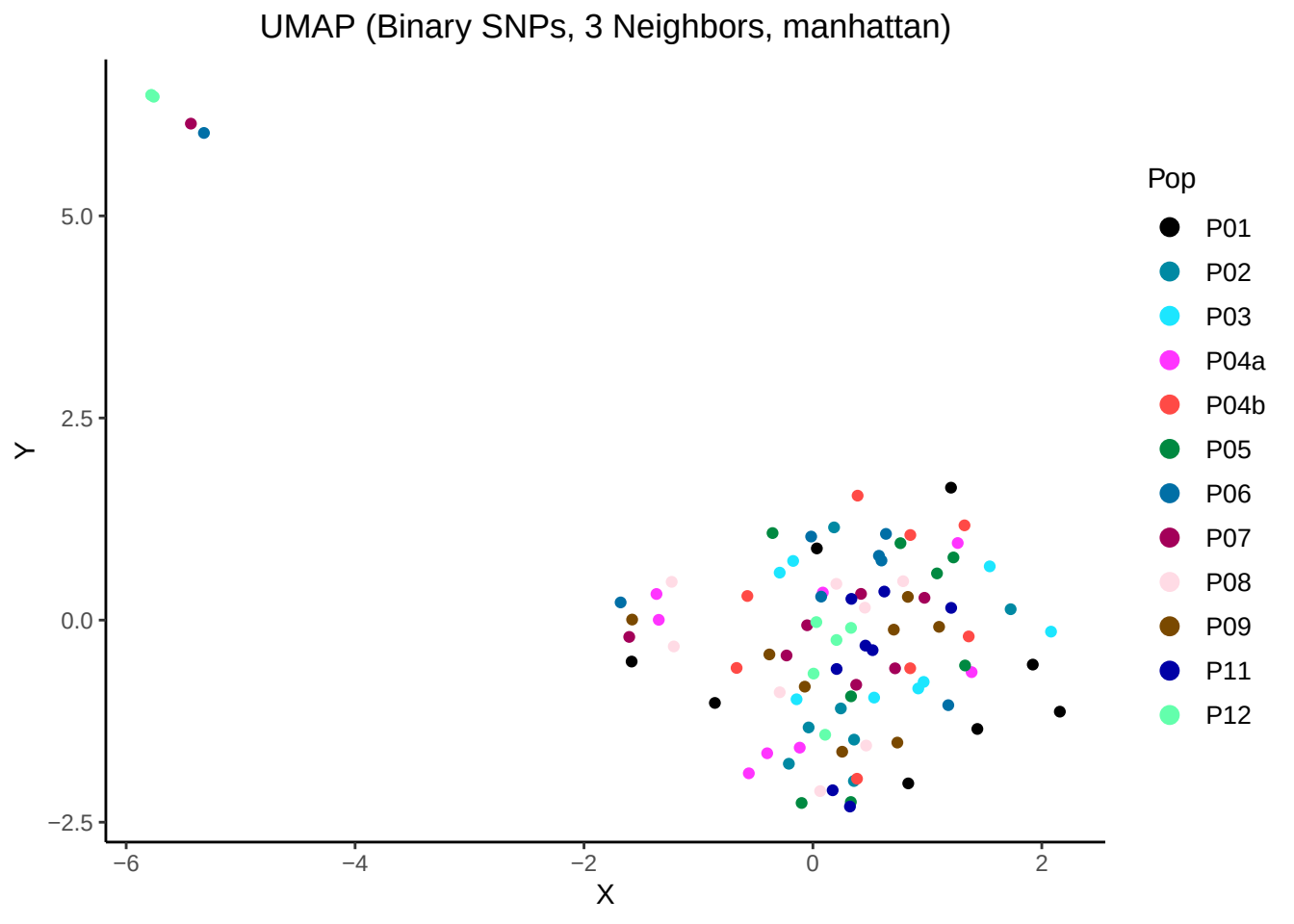

UMAP (Binary SNPs, 3 Neighbors, euclidean)
Y
X
2
1
0
−1
−5.0
−2.5
0.0
2.5
Sex
F
M

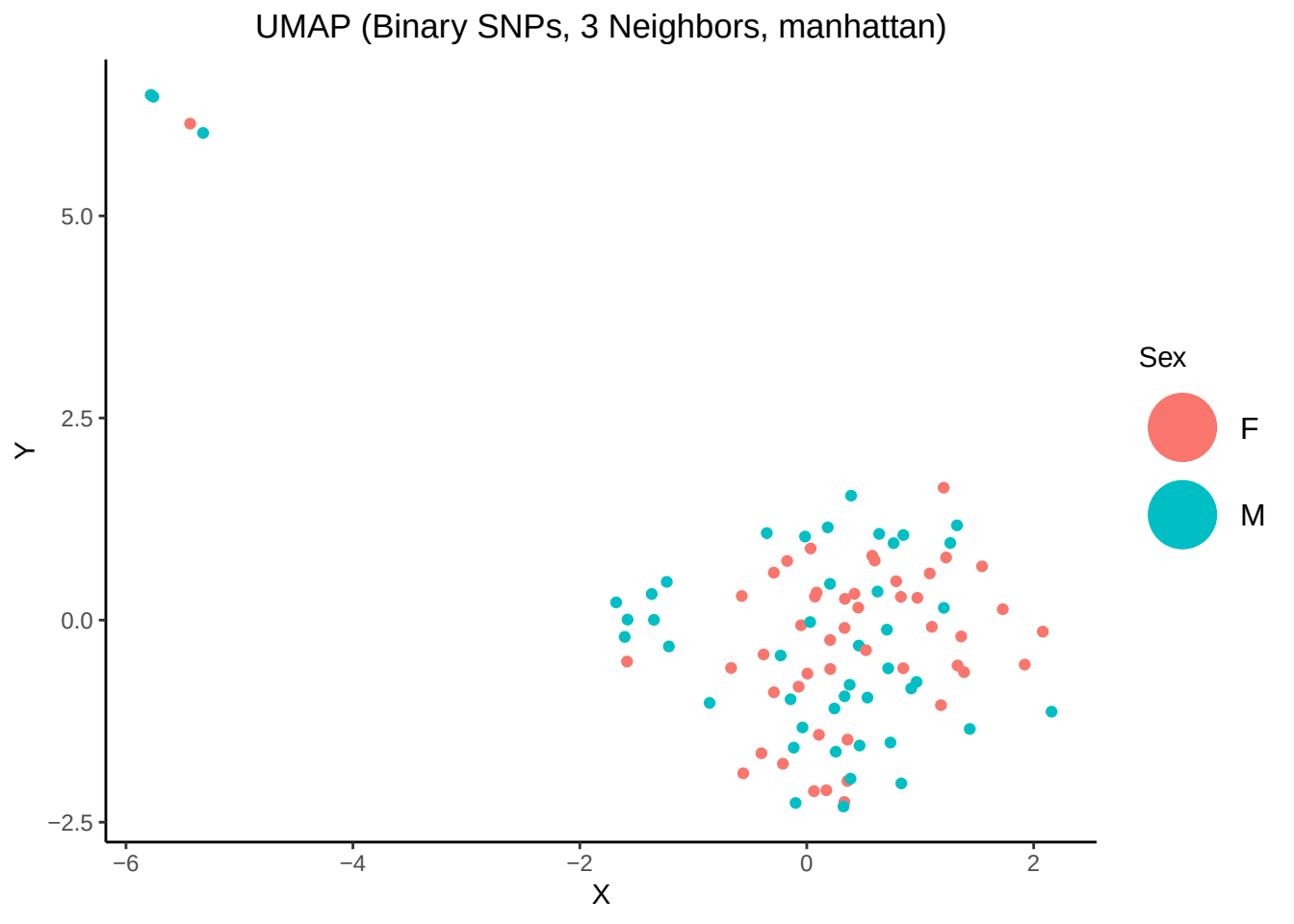

UMAP (Binary SNPs, 3 Neighbors, hamming)
5.0
2.5
0.0
−2.5
Y
−6
−4
−2
0
2
X
Geography
MD
NN
RA
VE

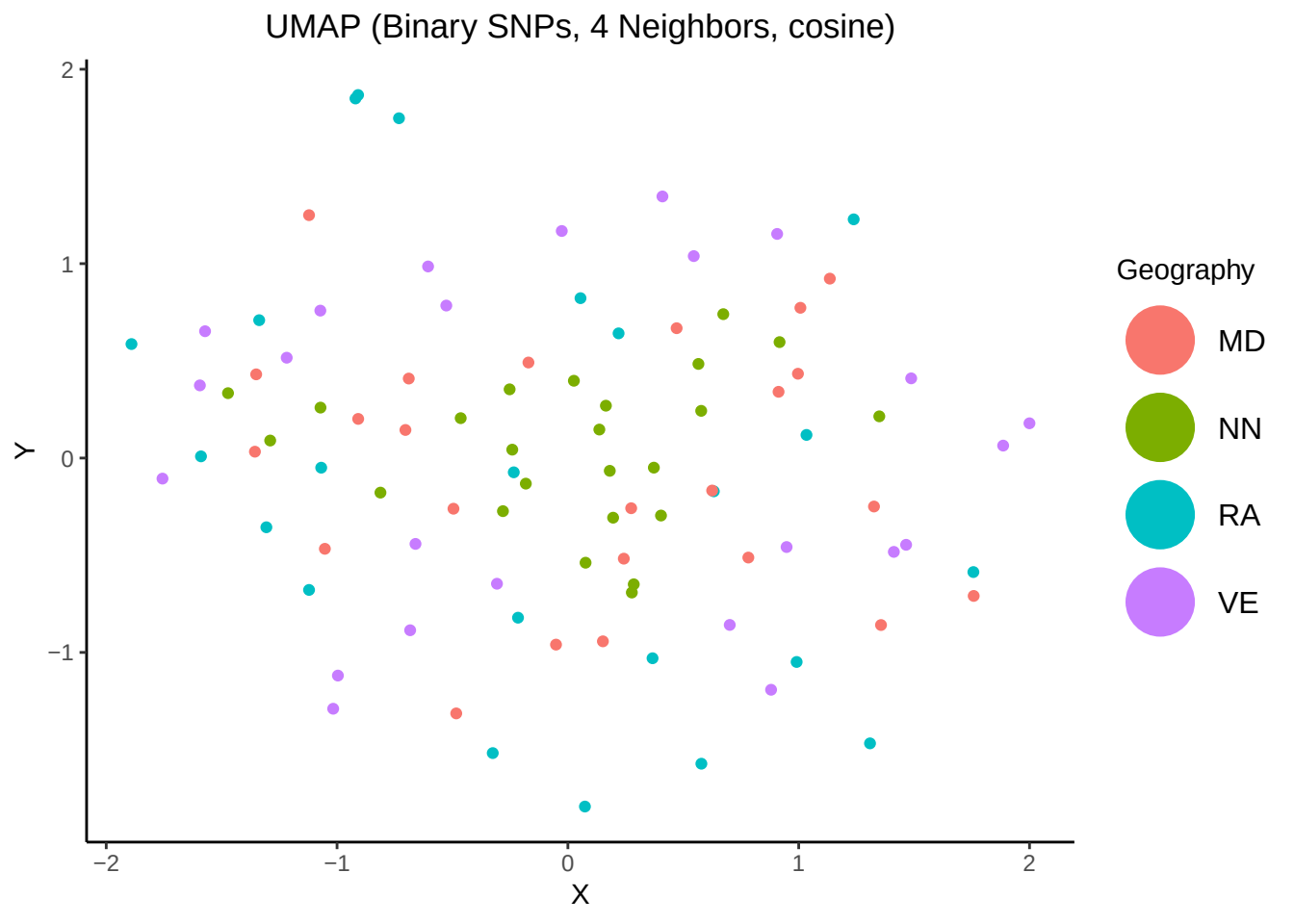

UMAP (Binary SNPs, 3 Neighbors, hamming)
Y
X
5.0
2.5
0.0
−2.5
−6
−4
−2
0
2
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12

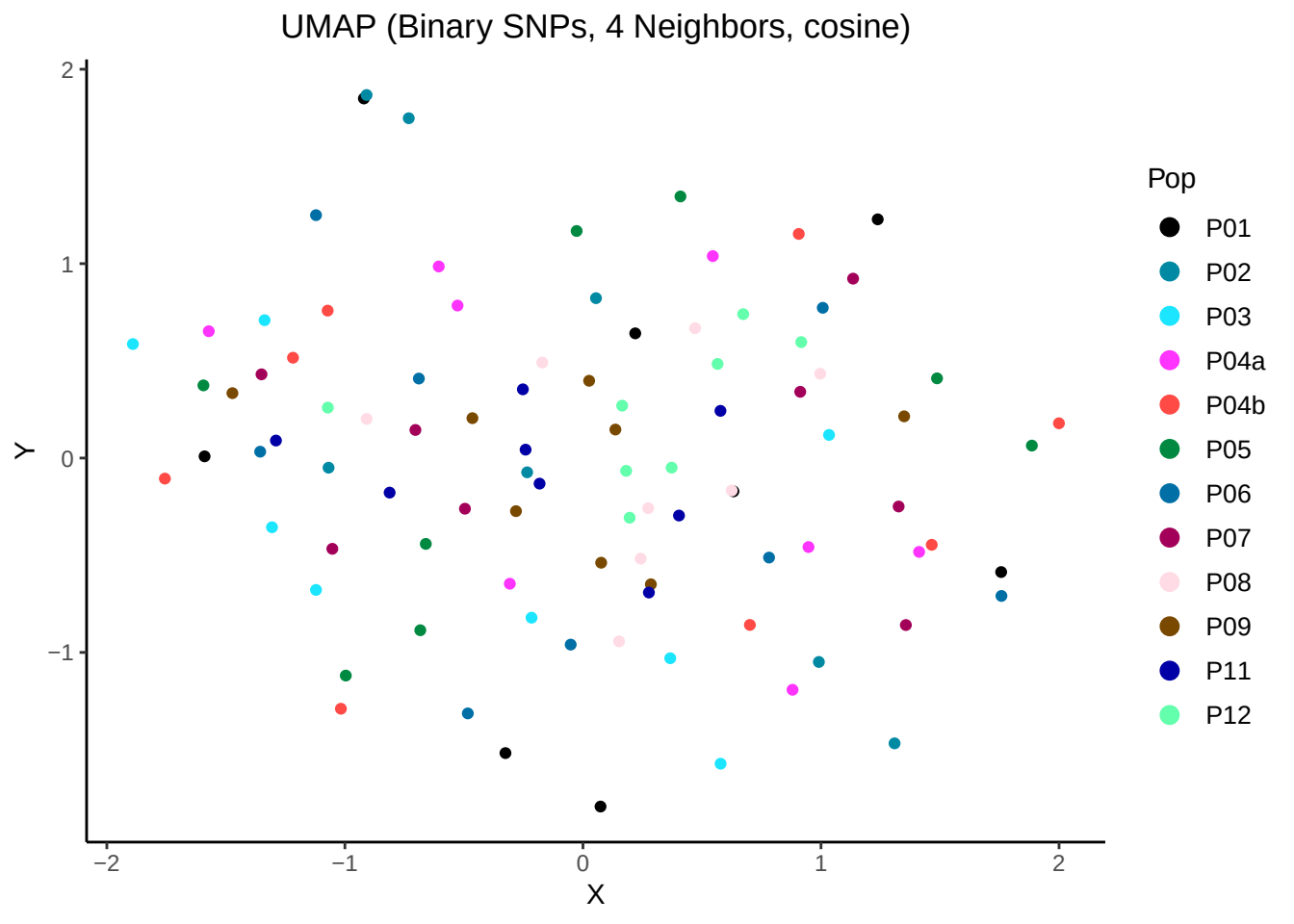

UMAP (Binary SNPs, 3 Neighbors, hamming)
5.0
2.5
0.0
−2.5
Y
−6
−4
−2
0
2
X
Sex
F
M

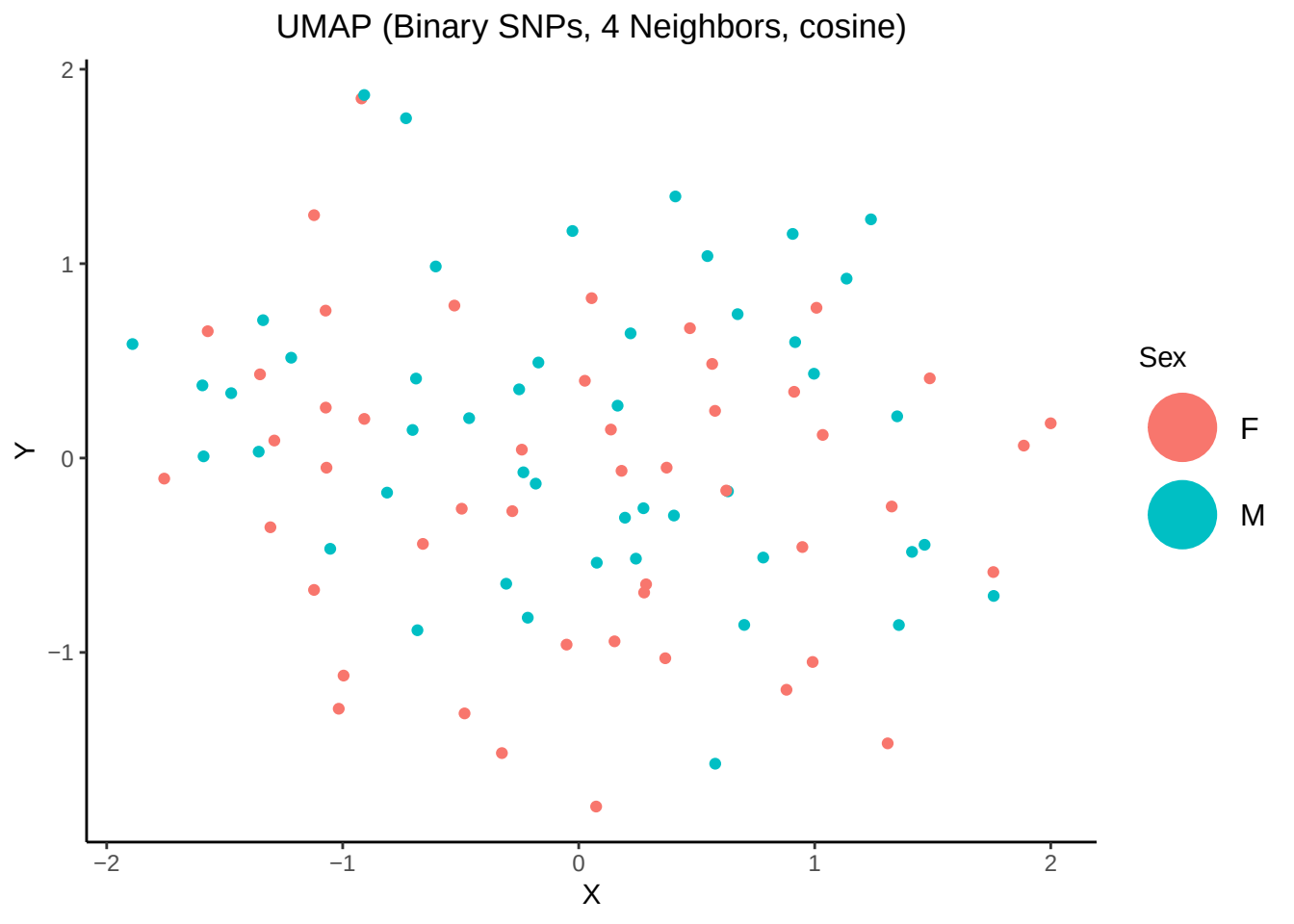

UMAP (Binary SNPs, 3 Neighbors, manhattan)
5.0
2.5
0.0
−2.5
Y
−6
−4
−2
0
2
X
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 3 Neighbors, manhattan)
Y
X
5.0
2.5
0.0
−2.5
−6
−4
−2
0
2
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12


UMAP (Binary SNPs, 3 Neighbors, manhattan)
Y
X
5.0
2.5
0.0
−2.5
−6
−4
−2
0
2
Sex
F
M


UMAP (Binary SNPs, 4 Neighbors, cosine)
Y
X
2
1
0
−1
−2
−1
0
1
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 4 Neighbors, cosine)
Y
X
2
1
0
−1
−2
−1
0
1
2
Pop
P01
P02
P03
P04a
P04b
P05
P06
P07
P08
P09
P11
P12


UMAP (Binary SNPs, 4 Neighbors, cosine)
Y
X
2
1
0
−1
−2
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2
Sex
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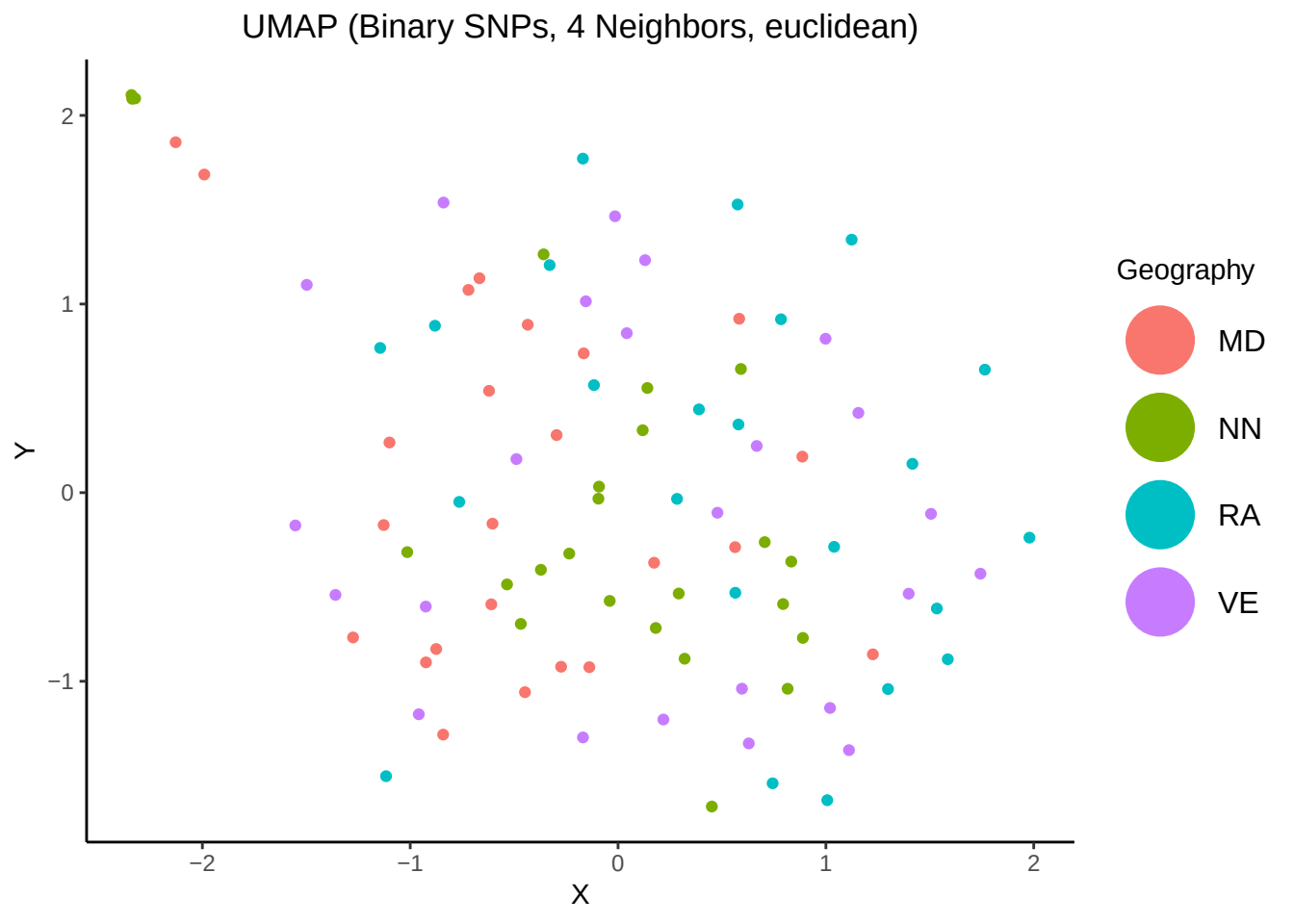
M


UMAP (Binary SNPs, 4 Neighbors, euclidean)
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X
2
1
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0
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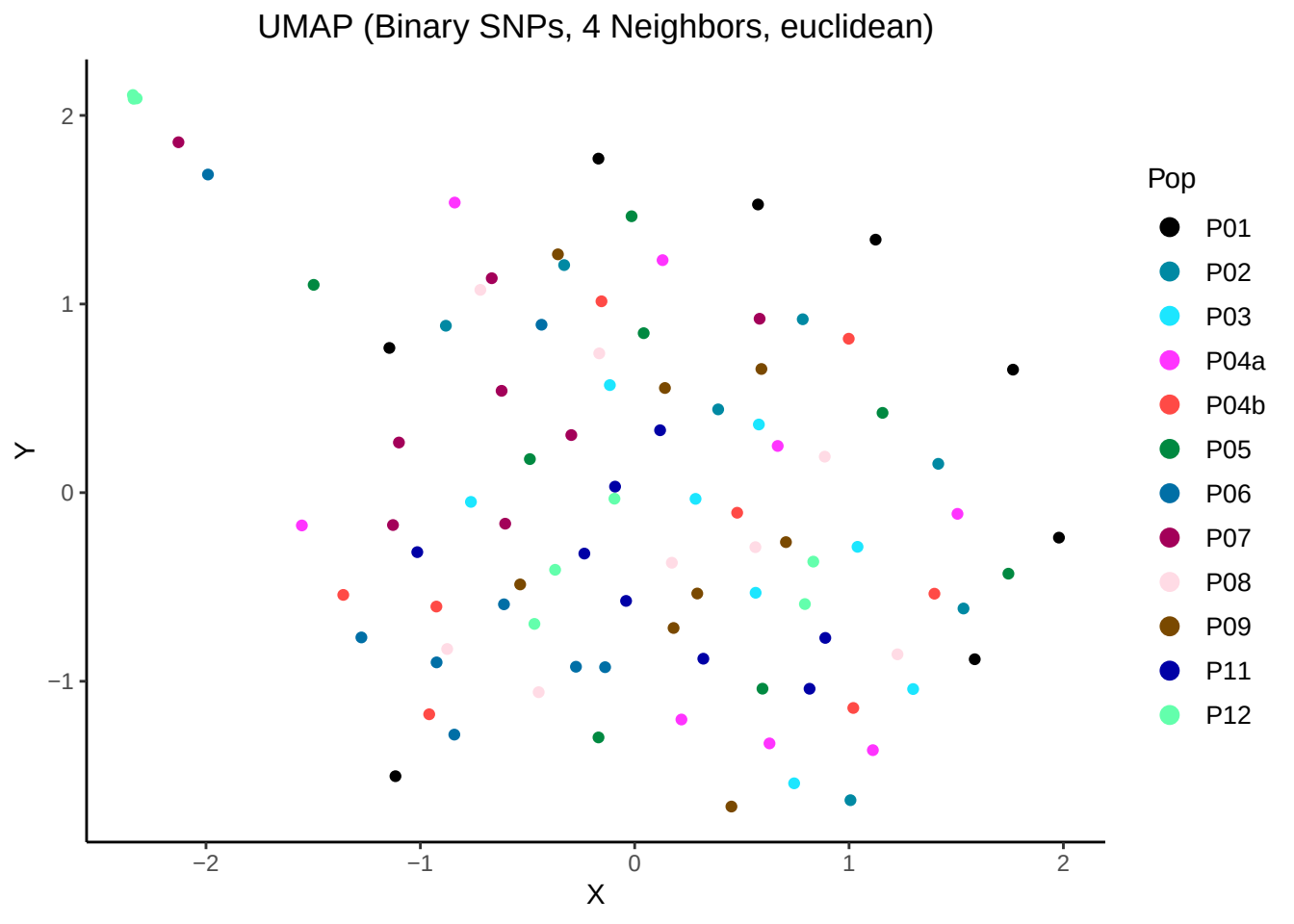
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 4 Neighbors, euclidean)
Y
X
2
1
0
−1
−2
−1
0
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2
Pop
P01
P02
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P04a
P04b
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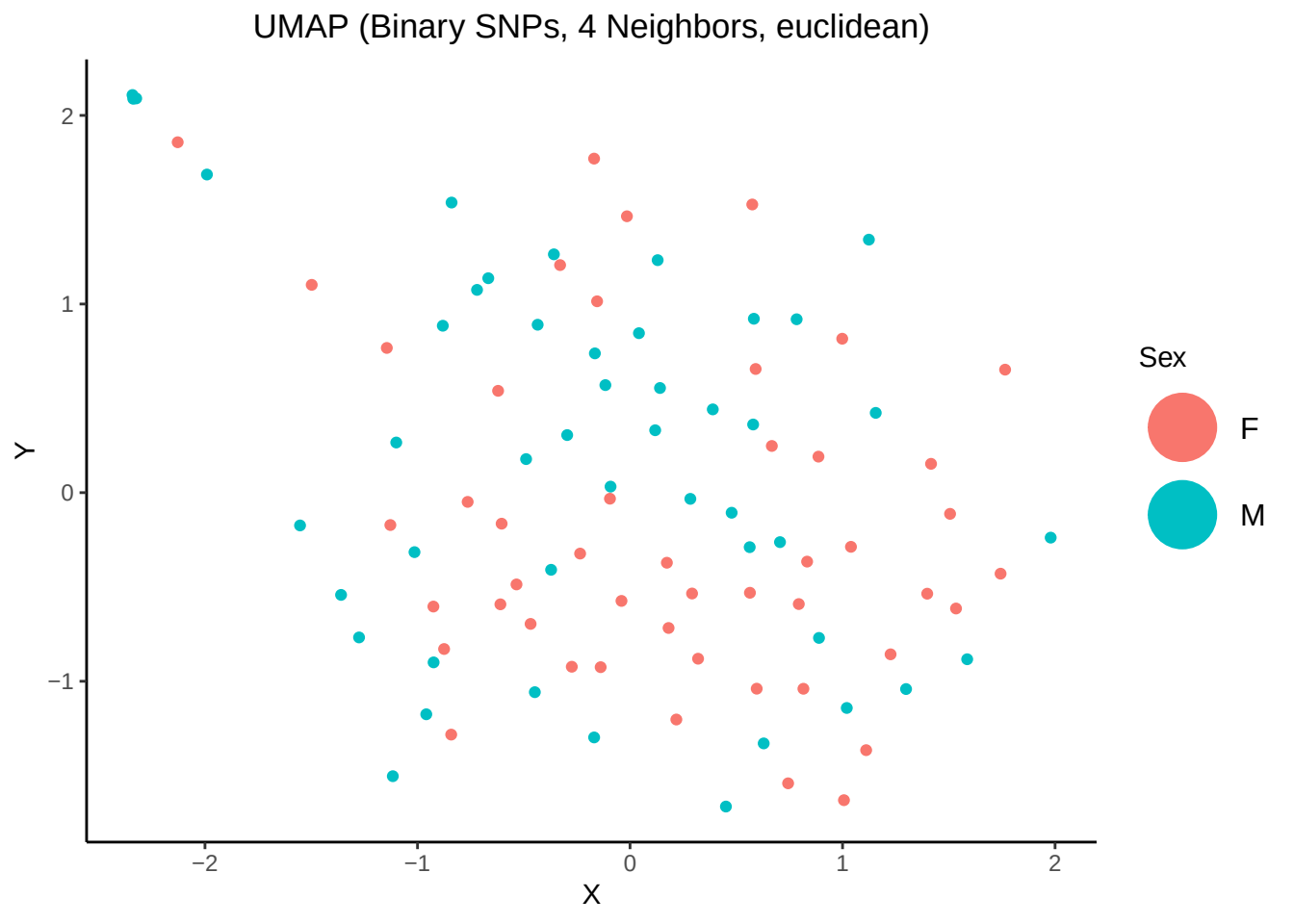
P11
P12


UMAP (Binary SNPs, 4 Neighbors, euclidean)
Y
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−2
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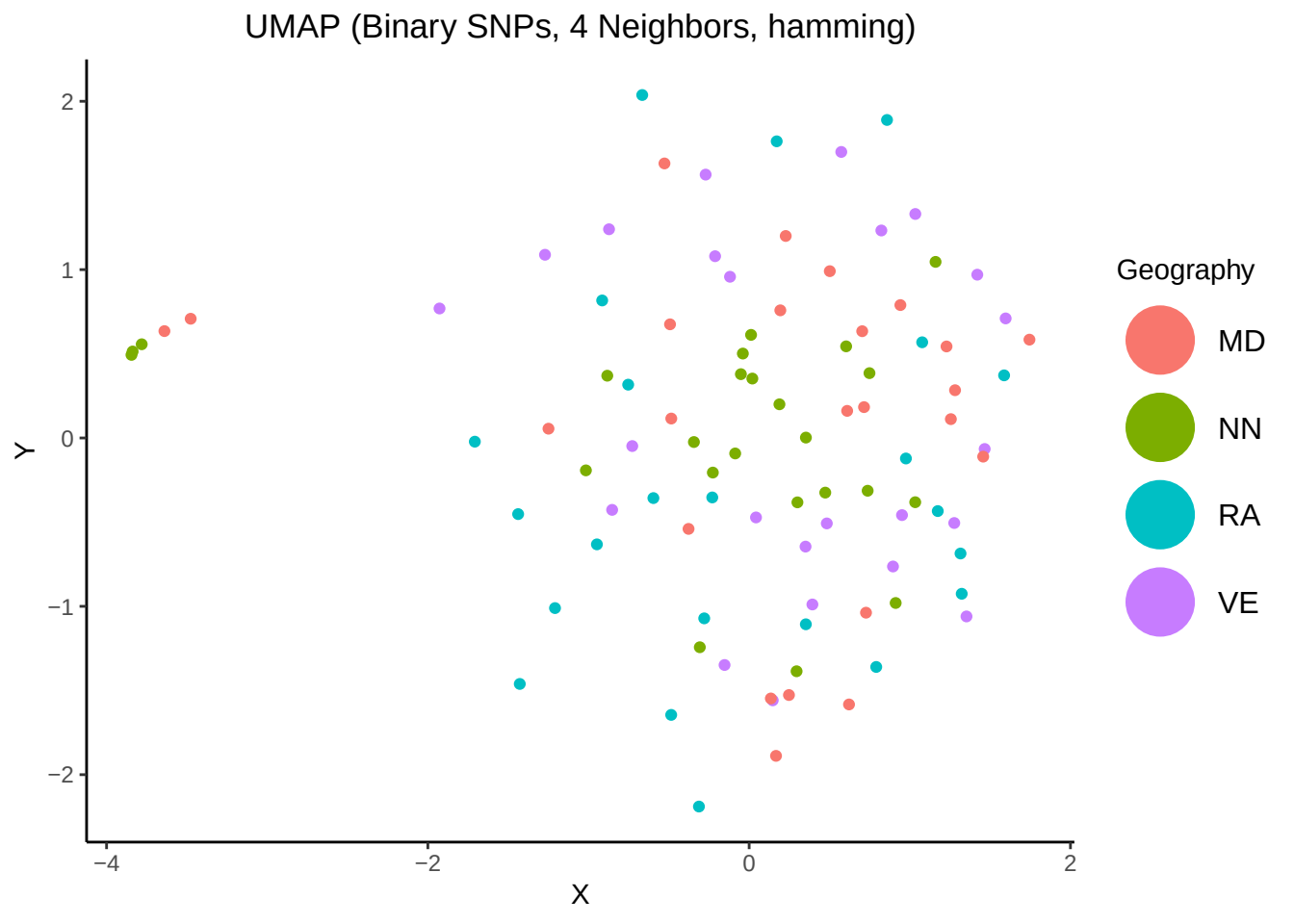
0
1
2
Sex
F
M


UMAP (Binary SNPs, 4 Neighbors, hamming)
Y
X
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−1
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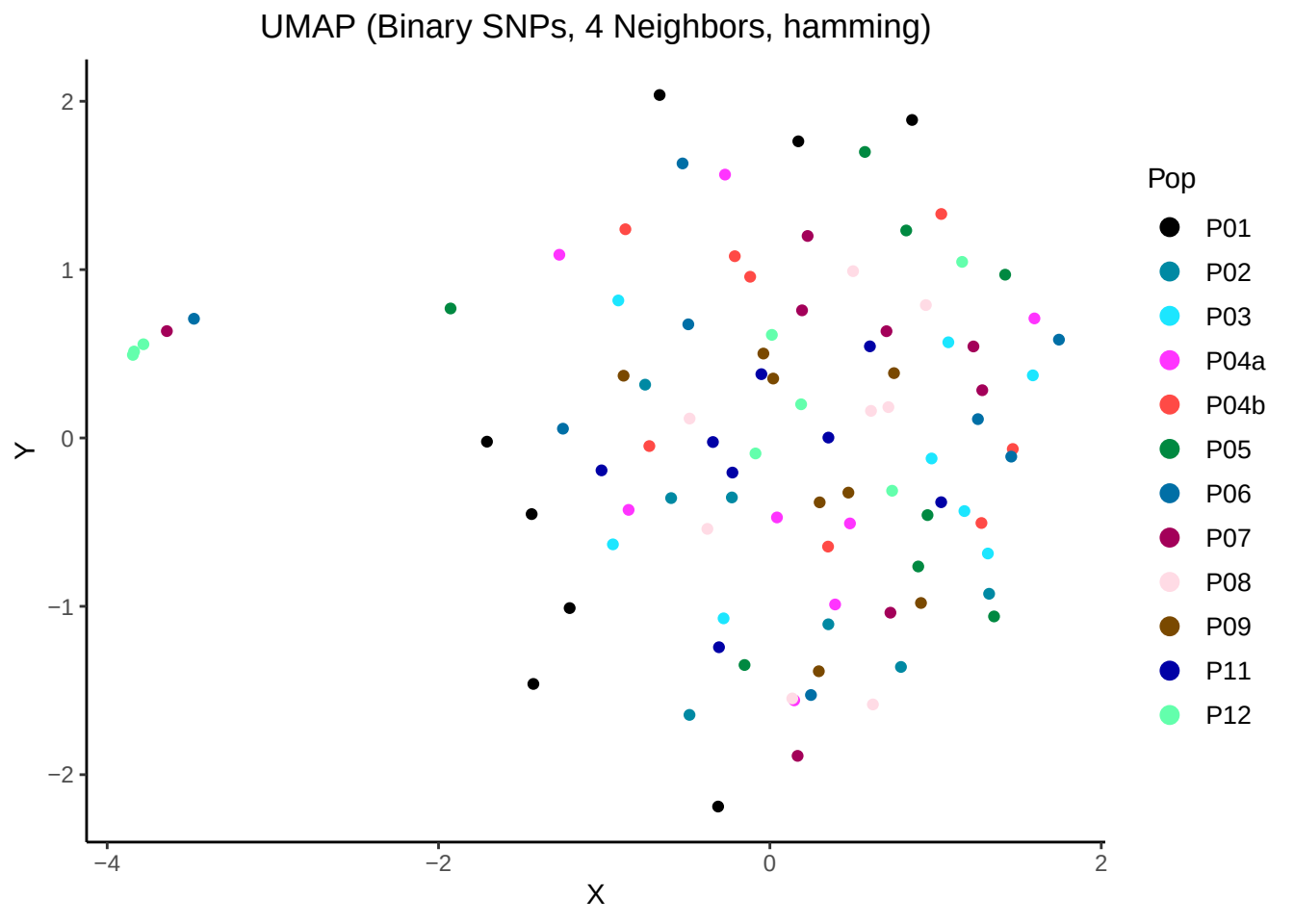
0
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 4 Neighbors, hamming)
Y
X
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−4
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Pop
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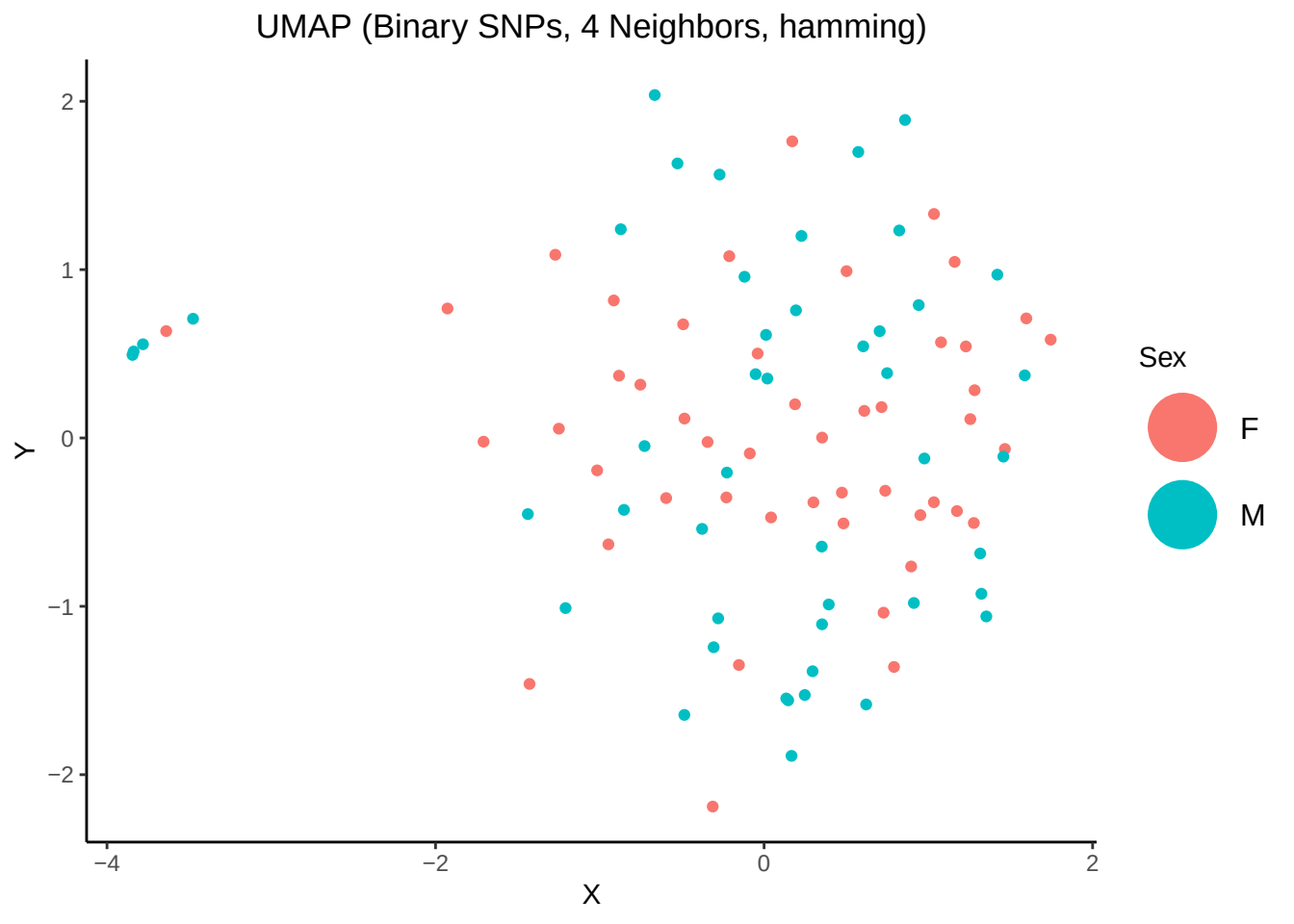
UMAP (Binary SNPs, 4 Neighbors, hamming)
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Sex
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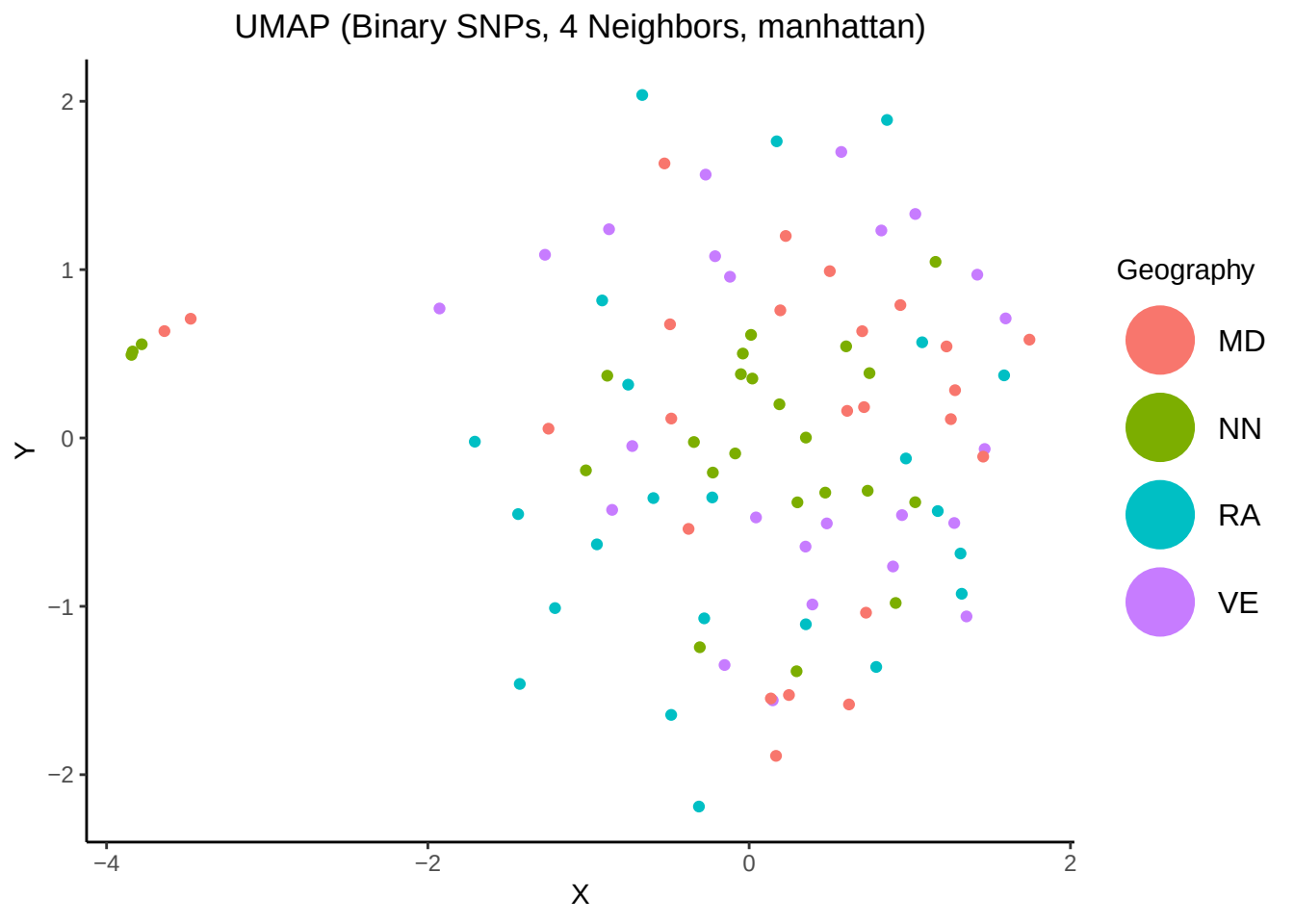
UMAP (Binary SNPs, 4 Neighbors, manhattan)
Y
X
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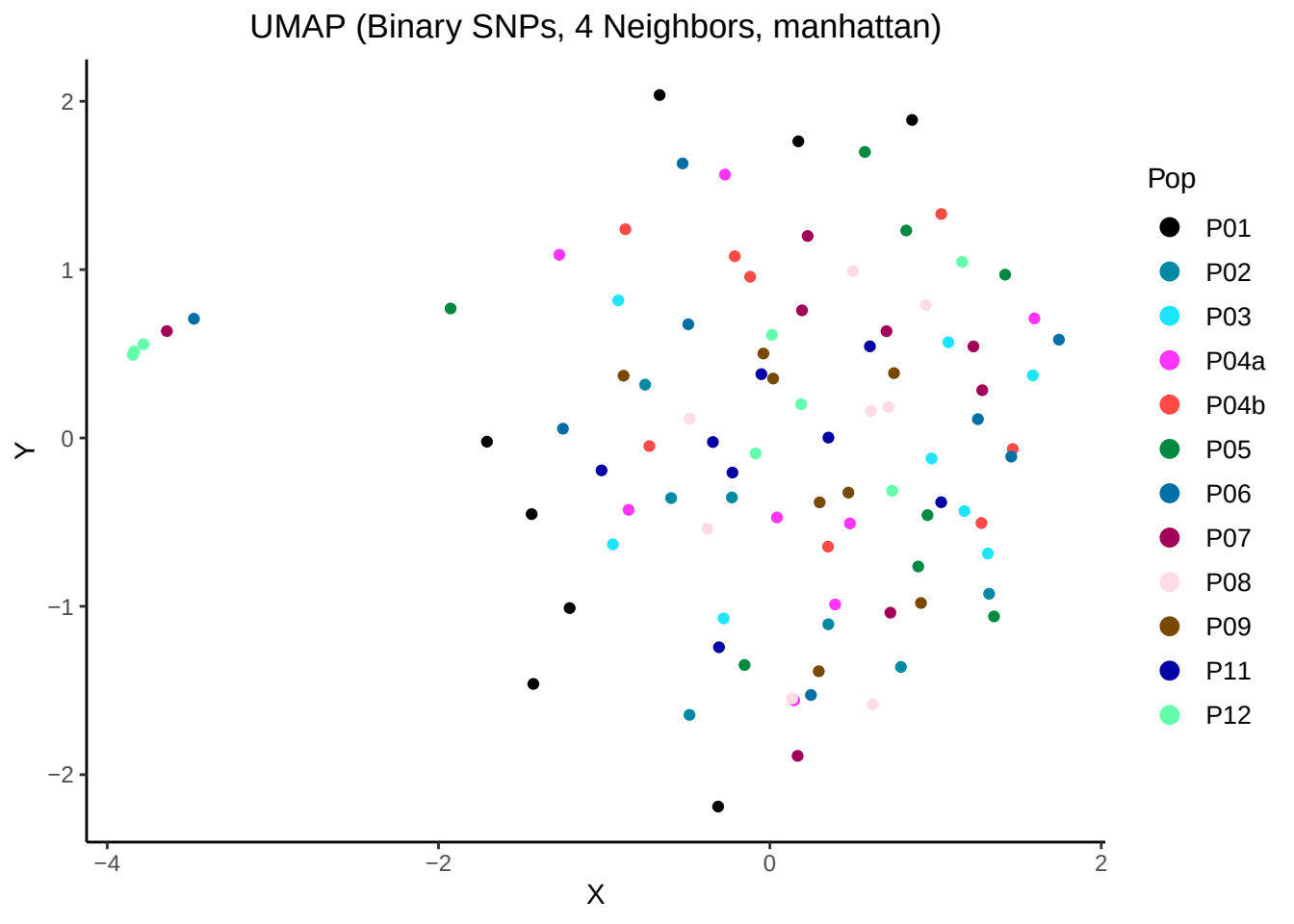
0
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 4 Neighbors, manhattan)
Y
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Pop
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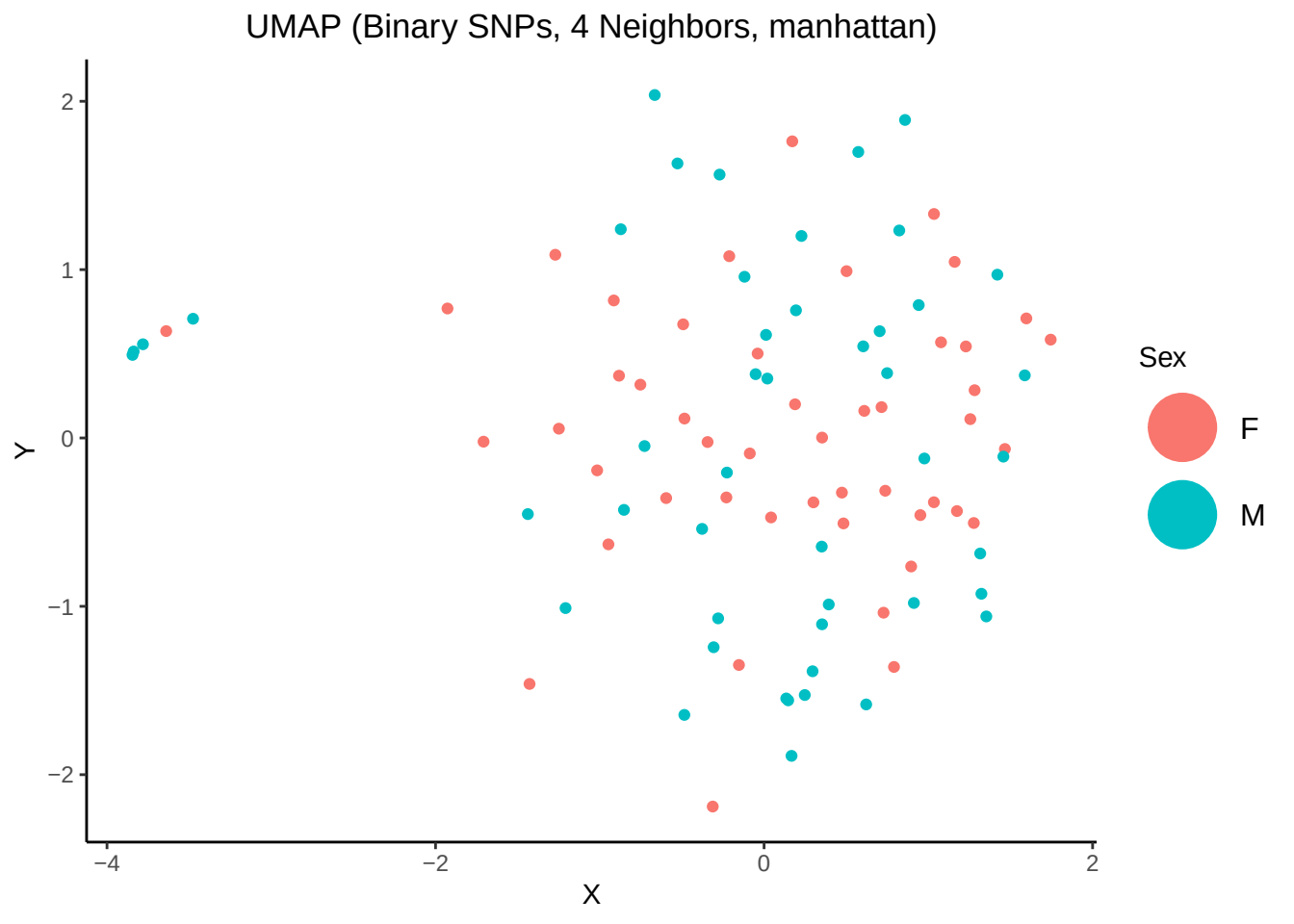
UMAP (Binary SNPs, 4 Neighbors, manhattan)
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Sex
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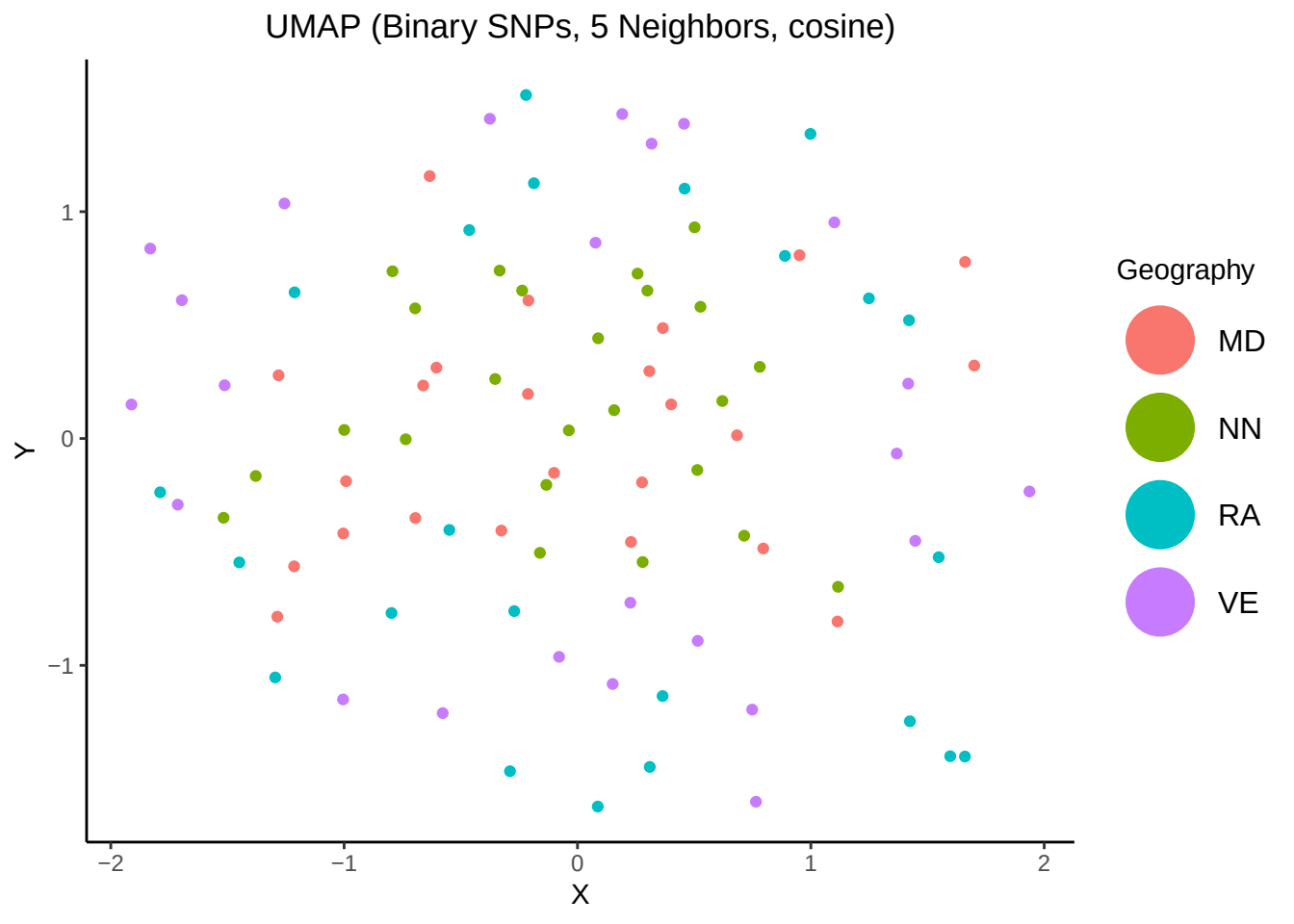
UMAP (Binary SNPs, 5 Neighbors, cosine)
Y
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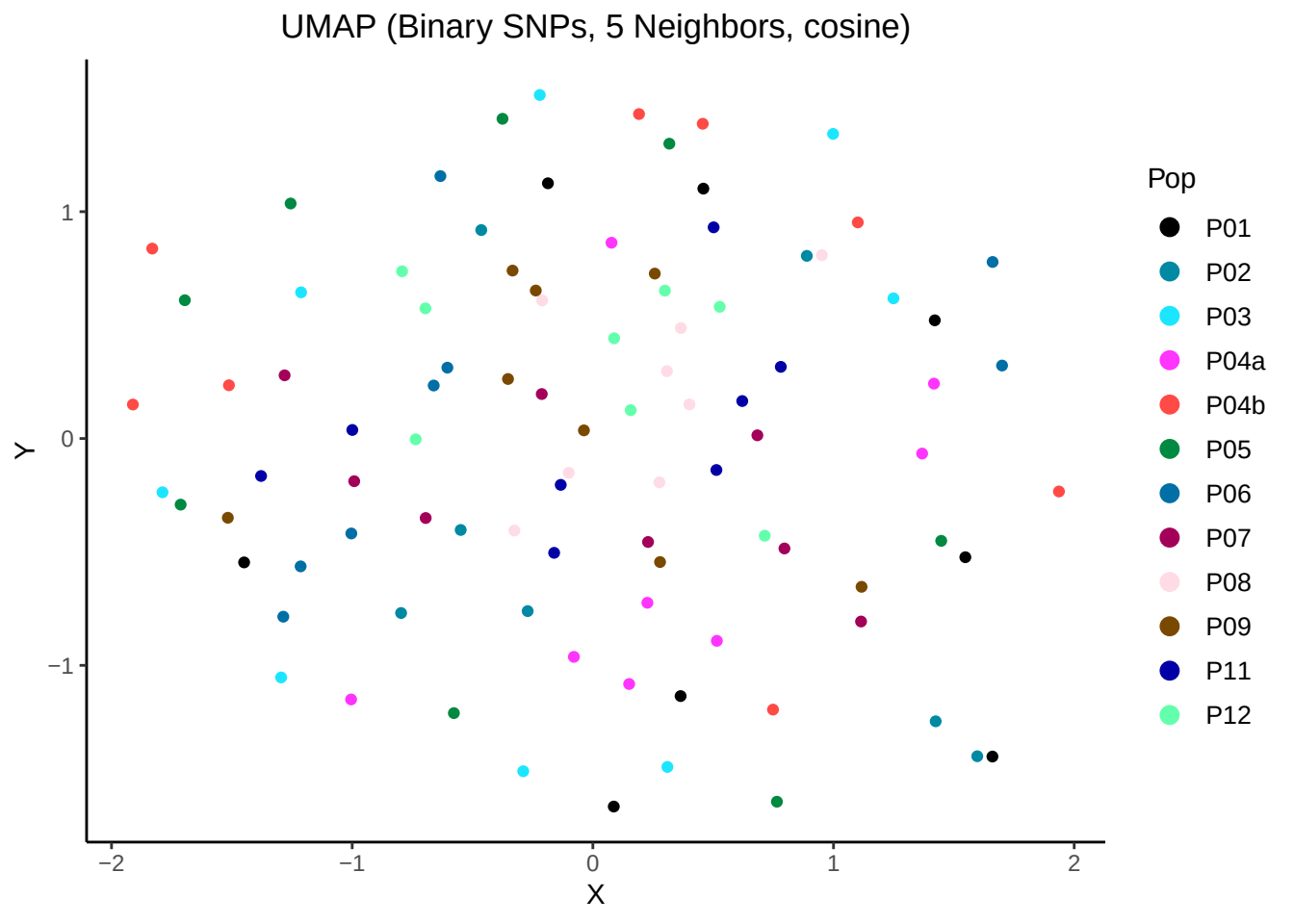
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 5 Neighbors, cosine)
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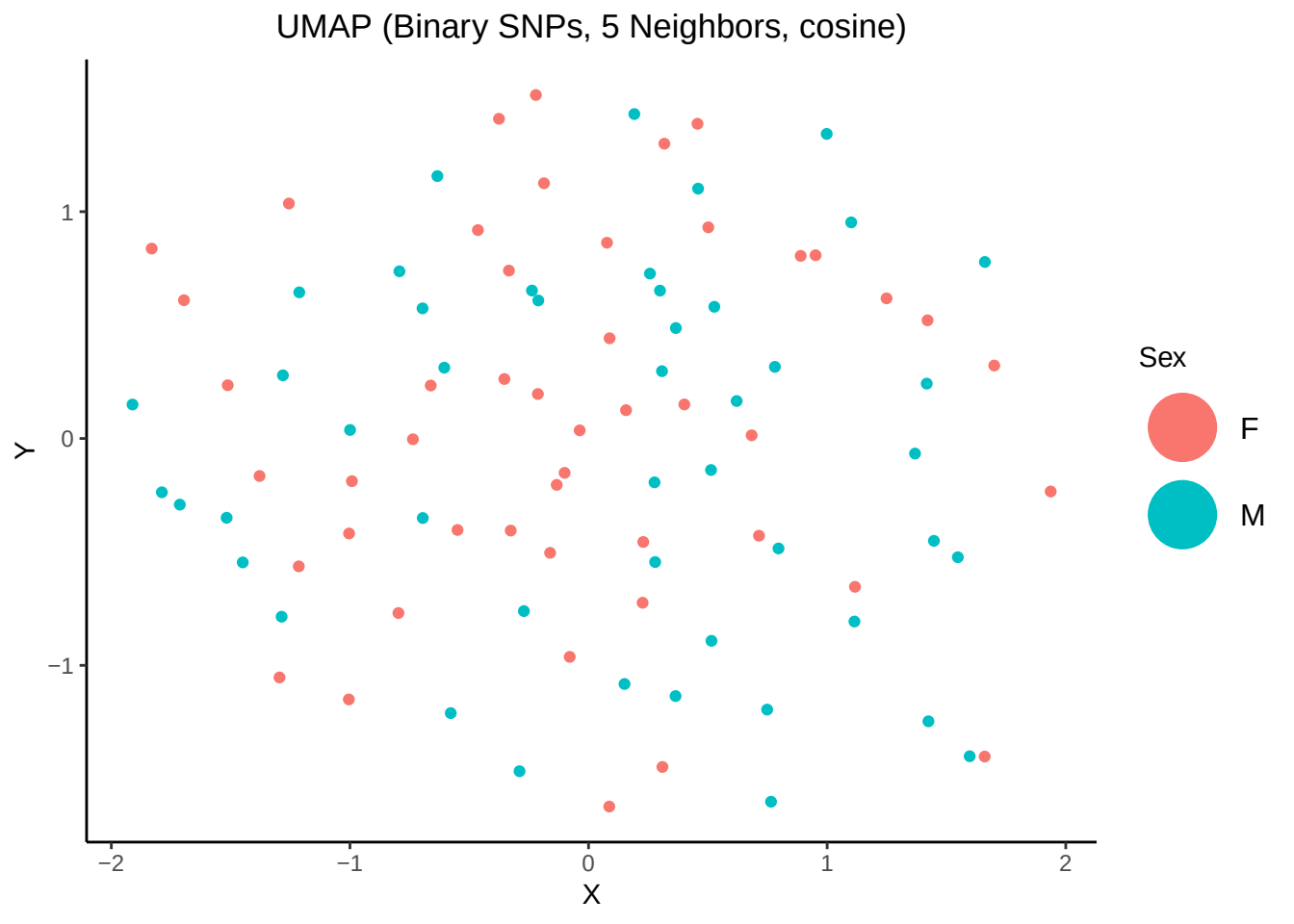
UMAP (Binary SNPs, 5 Neighbors, cosine)
Y
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Sex
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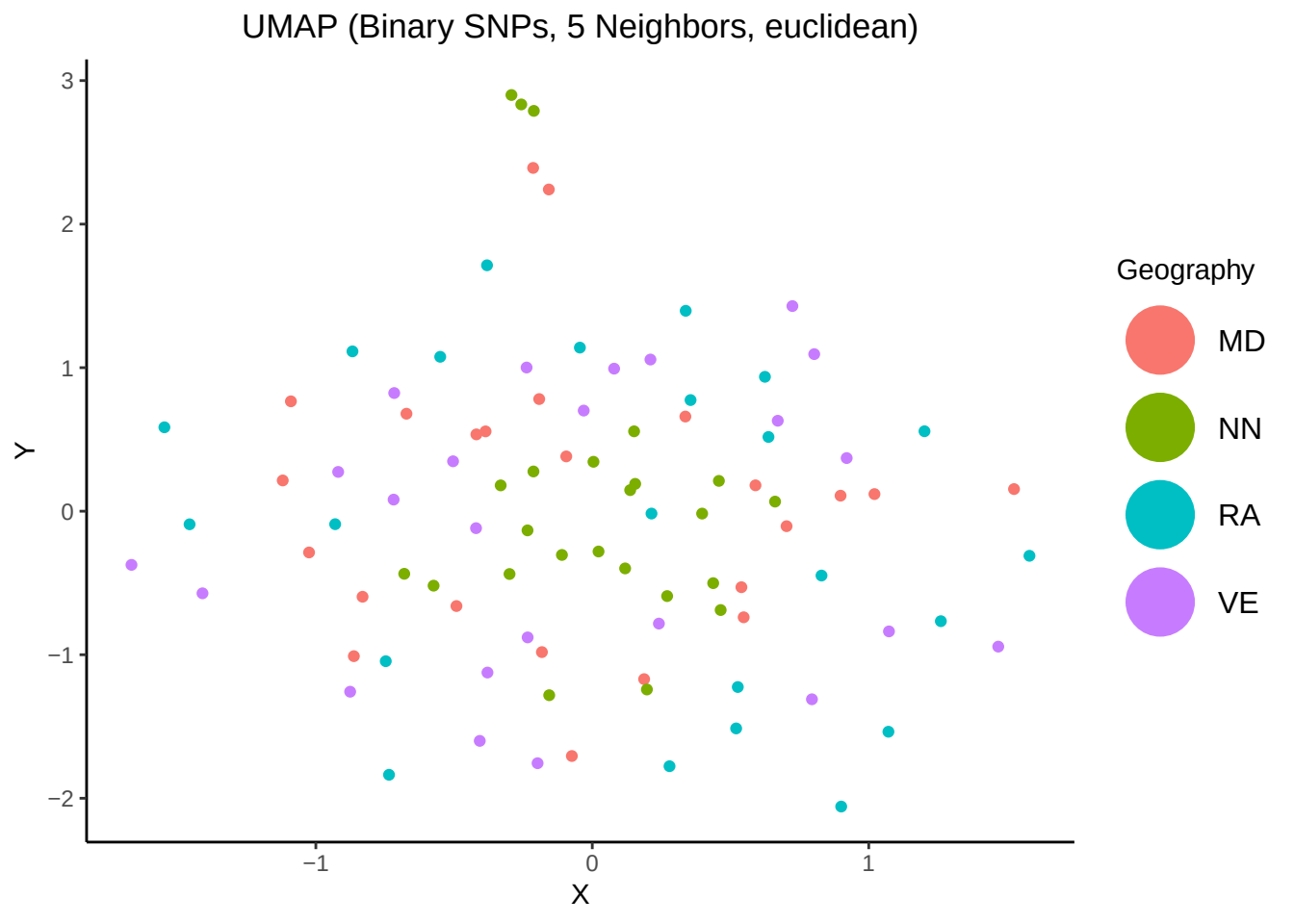
UMAP (Binary SNPs, 5 Neighbors, euclidean)
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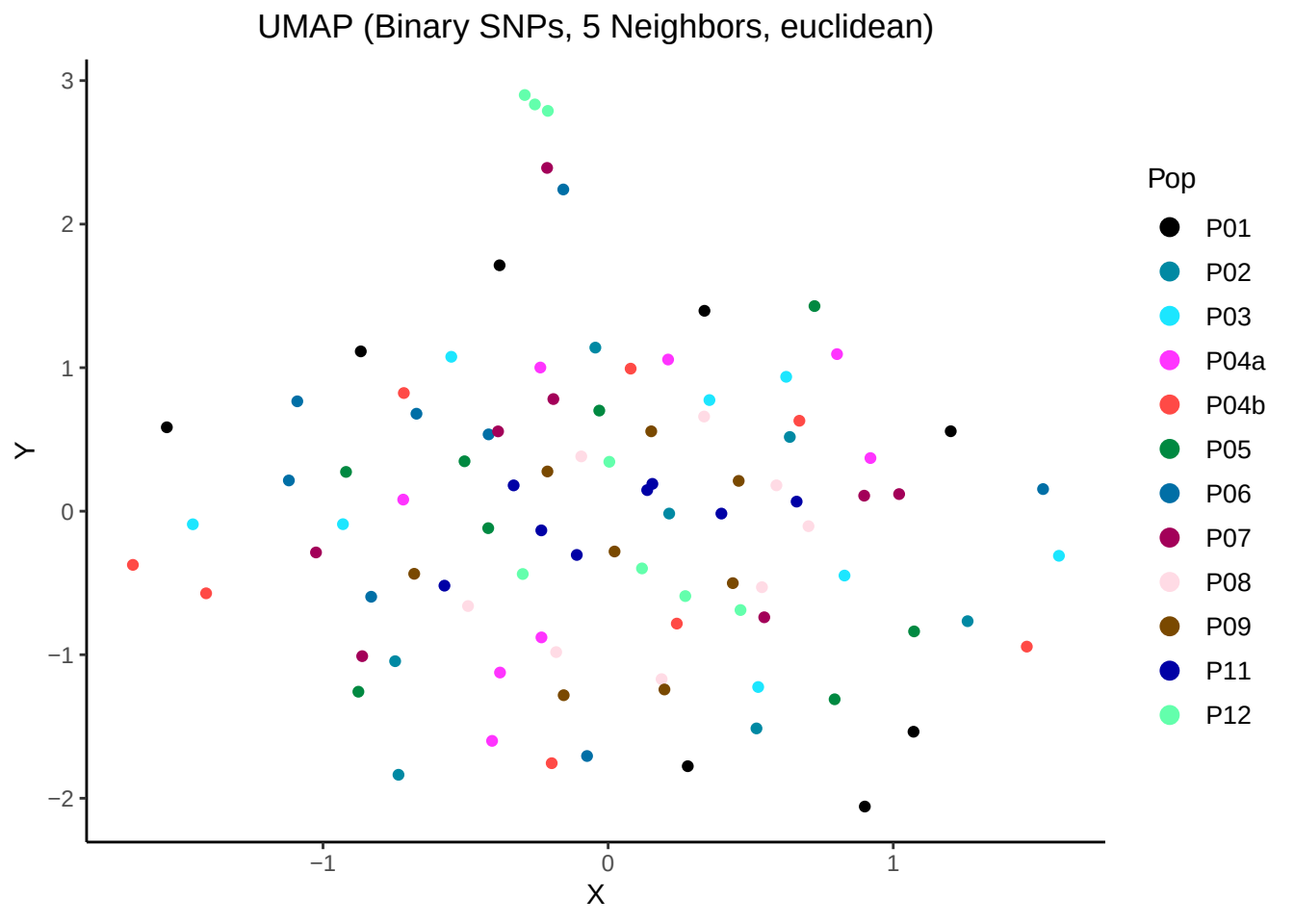
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 5 Neighbors, euclidean)
Y
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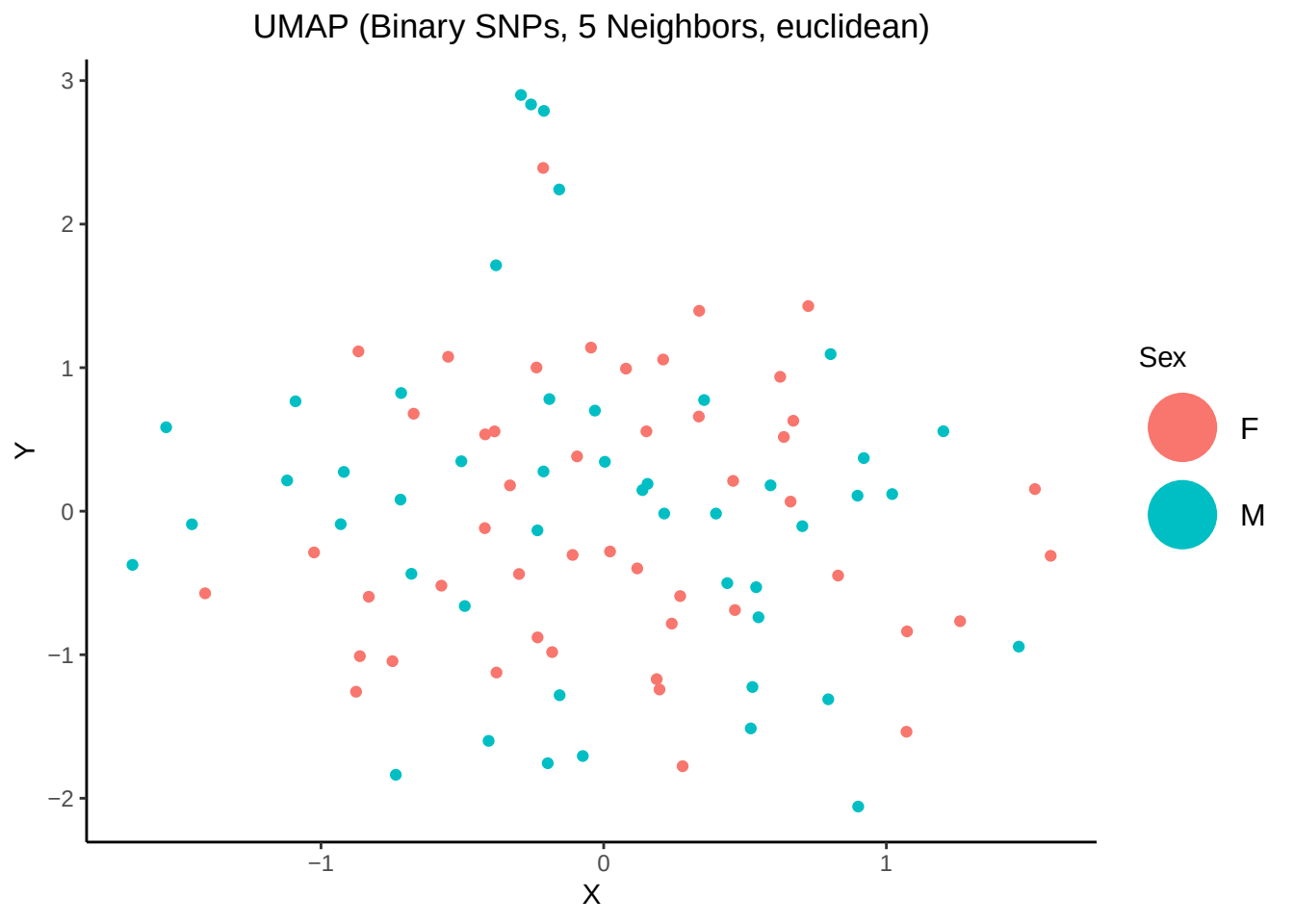
UMAP (Binary SNPs, 5 Neighbors, euclidean)
Y
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Sex
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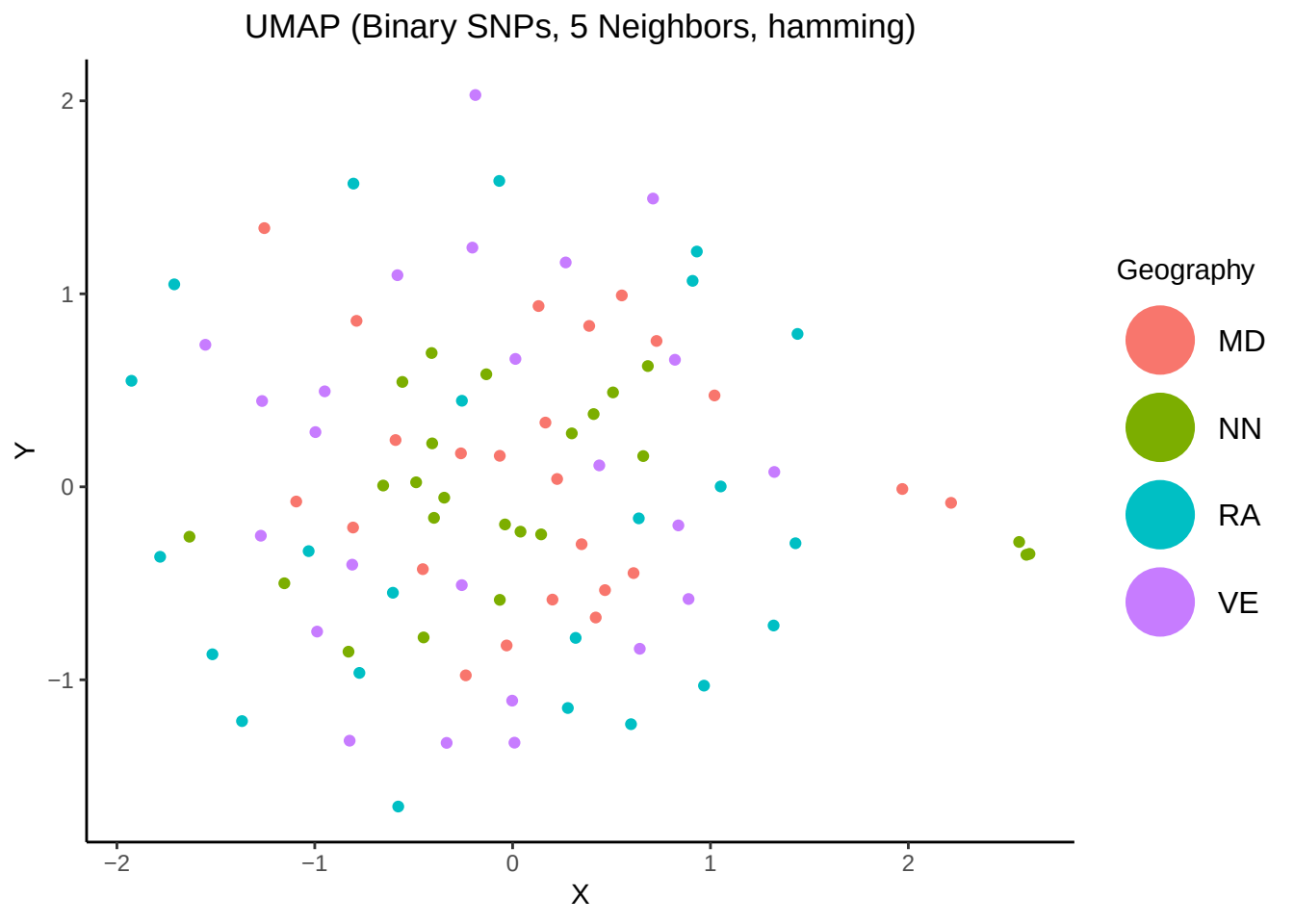
M


UMAP (Binary SNPs, 5 Neighbors, hamming)
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X
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Geography
MD
NN
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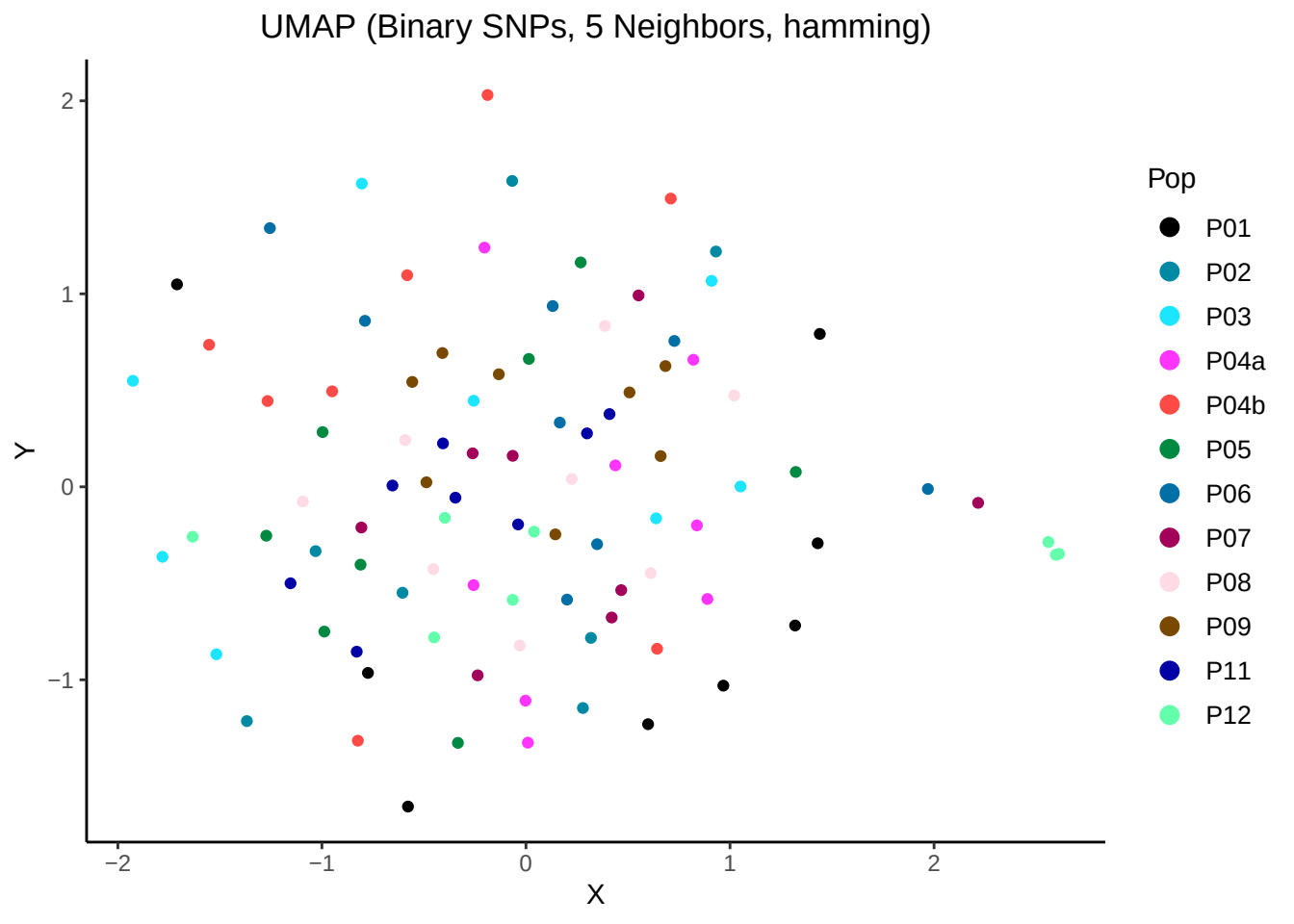
VE


UMAP (Binary SNPs, 5 Neighbors, hamming)
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Pop
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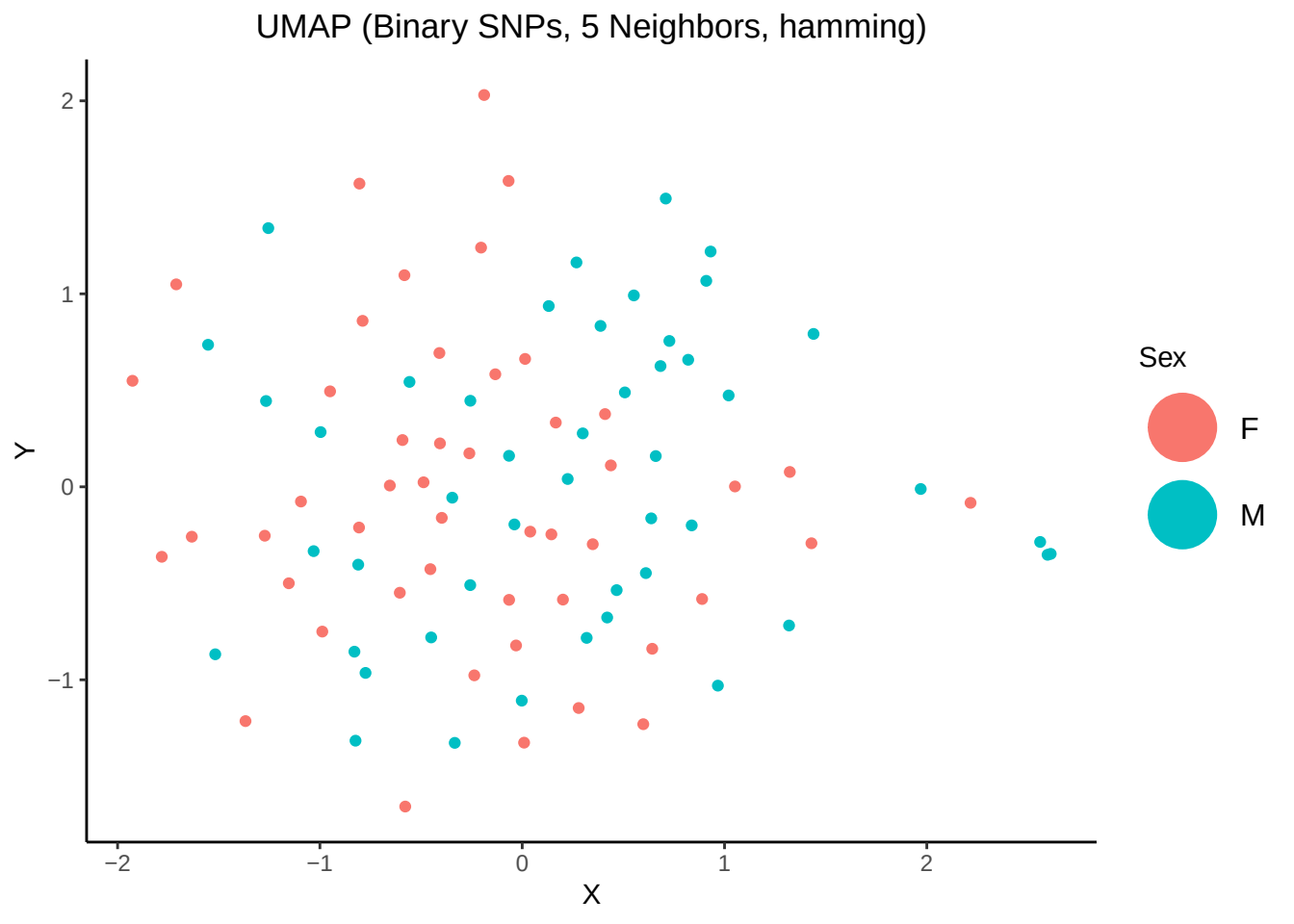
UMAP (Binary SNPs, 5 Neighbors, hamming)
Y
X
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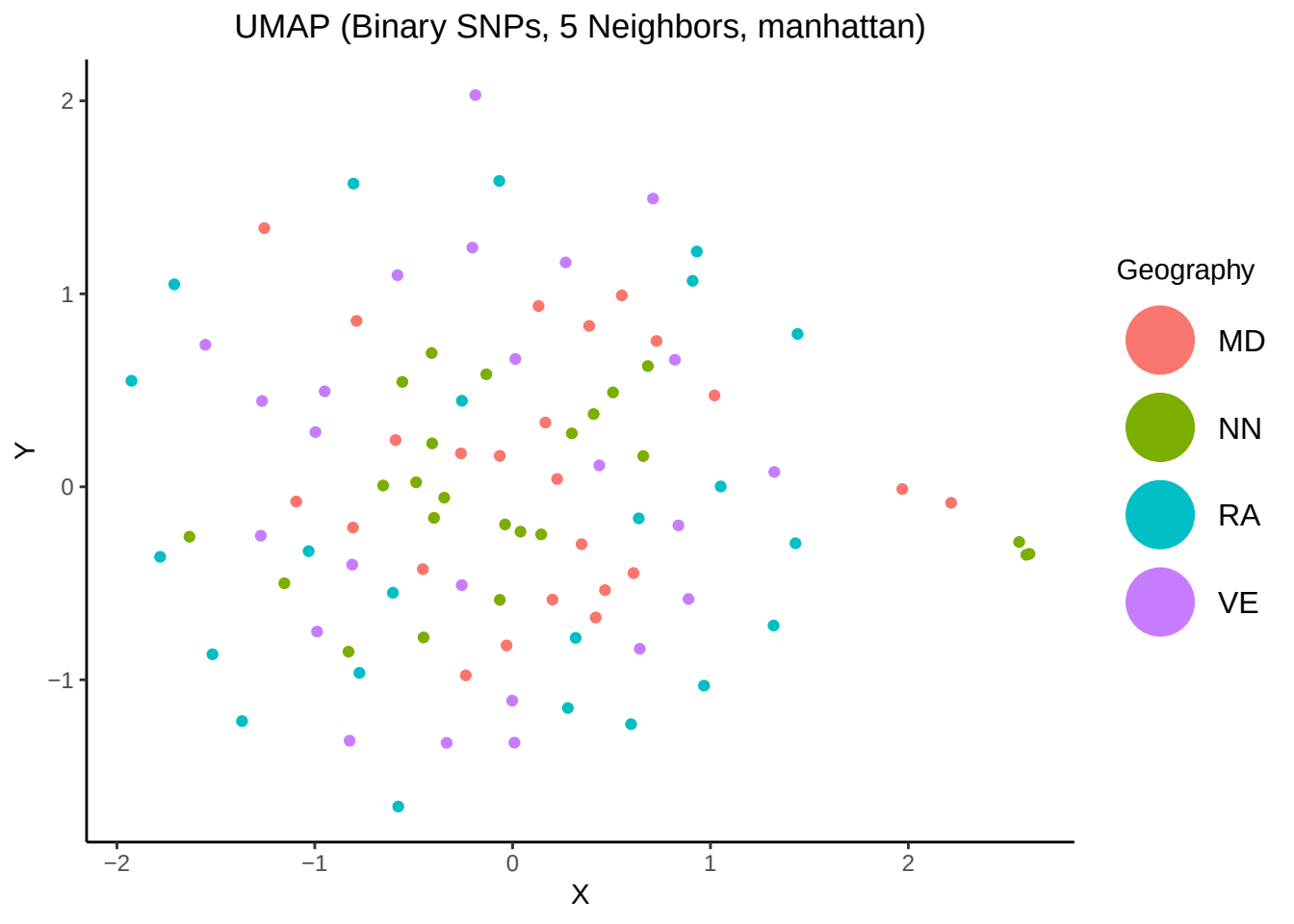
Sex
F
M


UMAP (Binary SNPs, 5 Neighbors, manhattan)
Y
X
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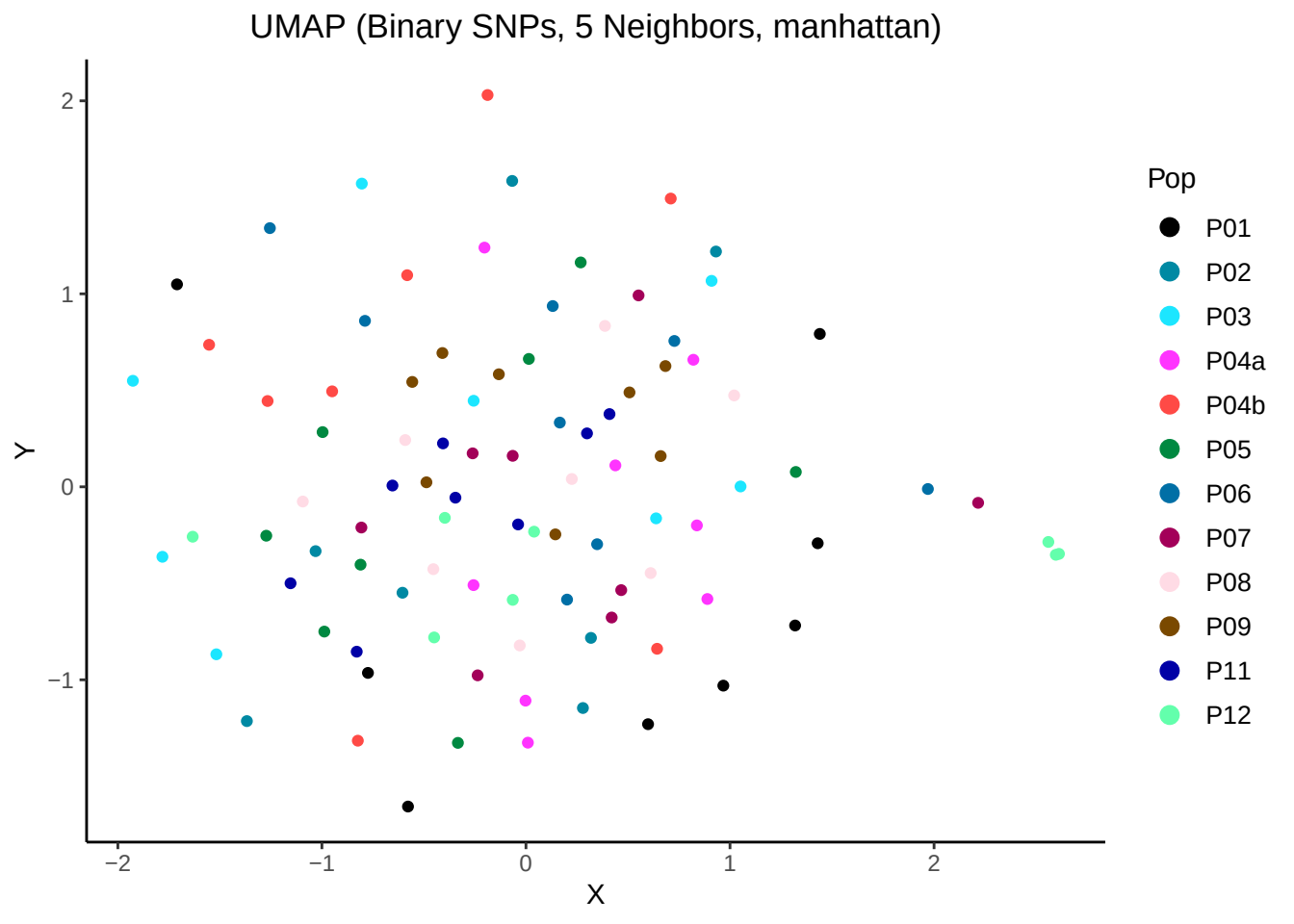
1
2
Geography
MD
NN
RA
VE


UMAP (Binary SNPs, 5 Neighbors, manhattan)
Y
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Pop
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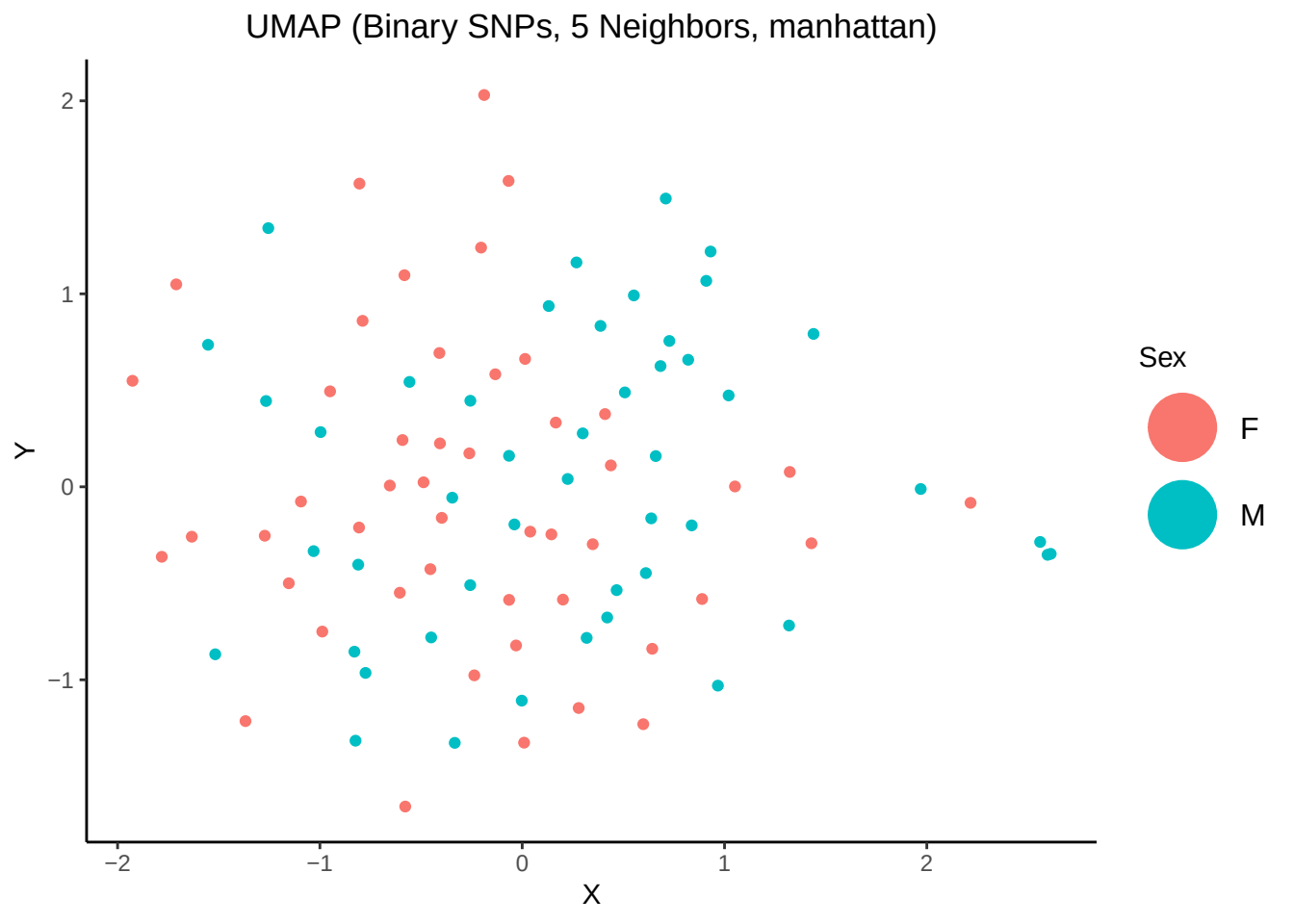
UMAP (Binary SNPs, 5 Neighbors, manhattan)
Y
X
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Sex
F
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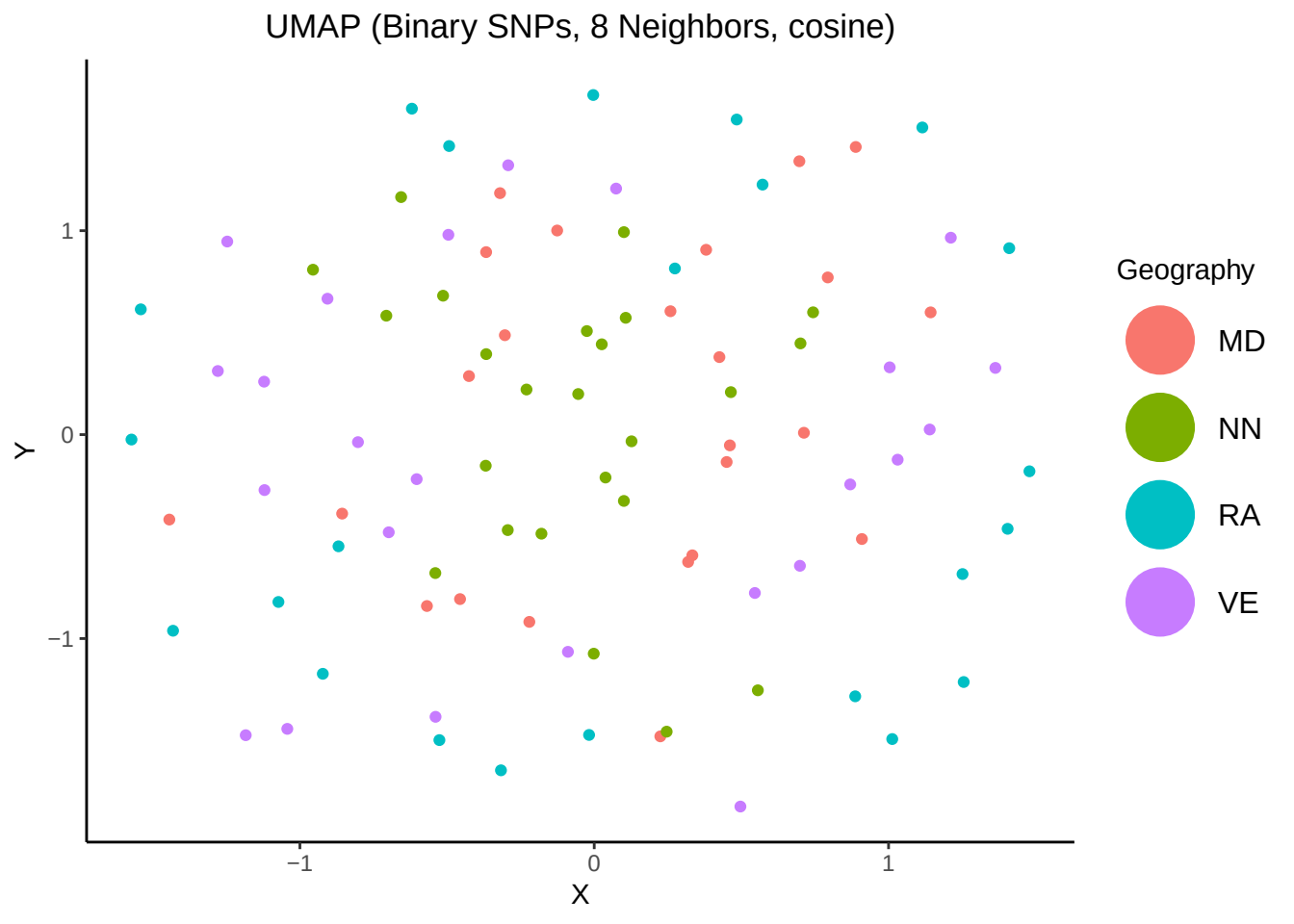
UMAP (Binary SNPs, 8 Neighbors, cosine)
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X
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Geography
MD
NN
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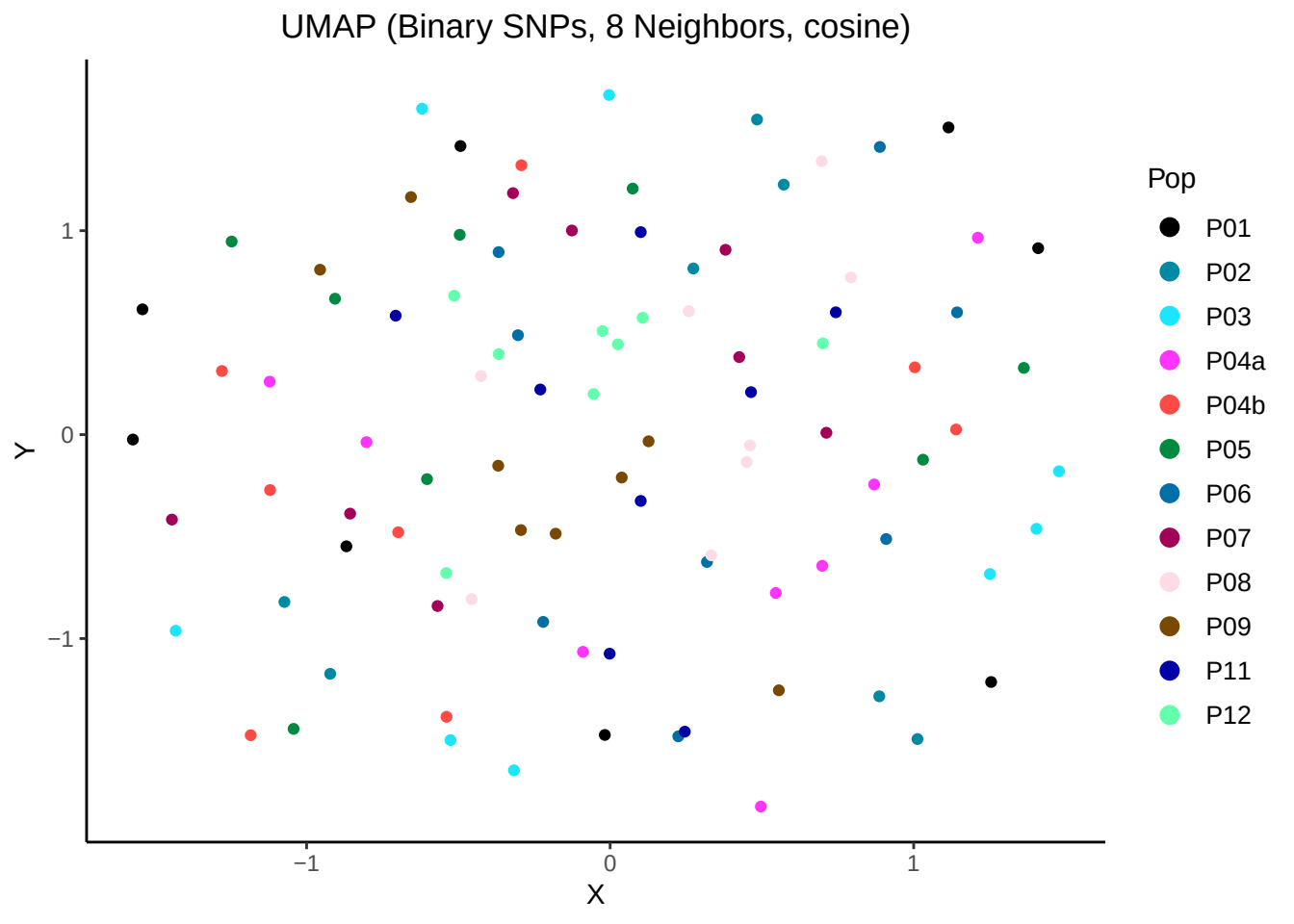
UMAP (Binary SNPs, 8 Neighbors, cosine)
Y
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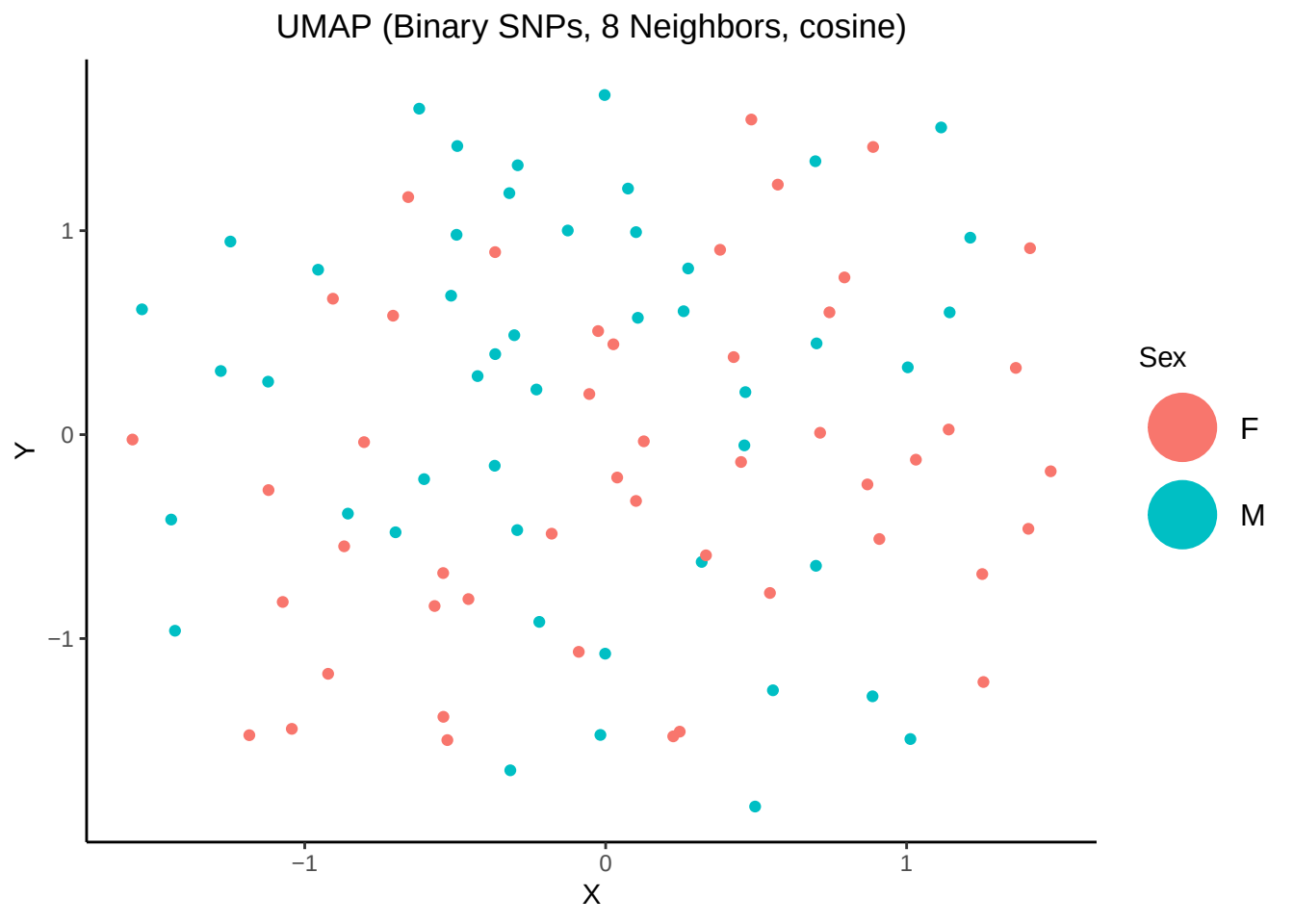
UMAP (Binary SNPs, 8 Neighbors, cosine)
Y
X
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Sex
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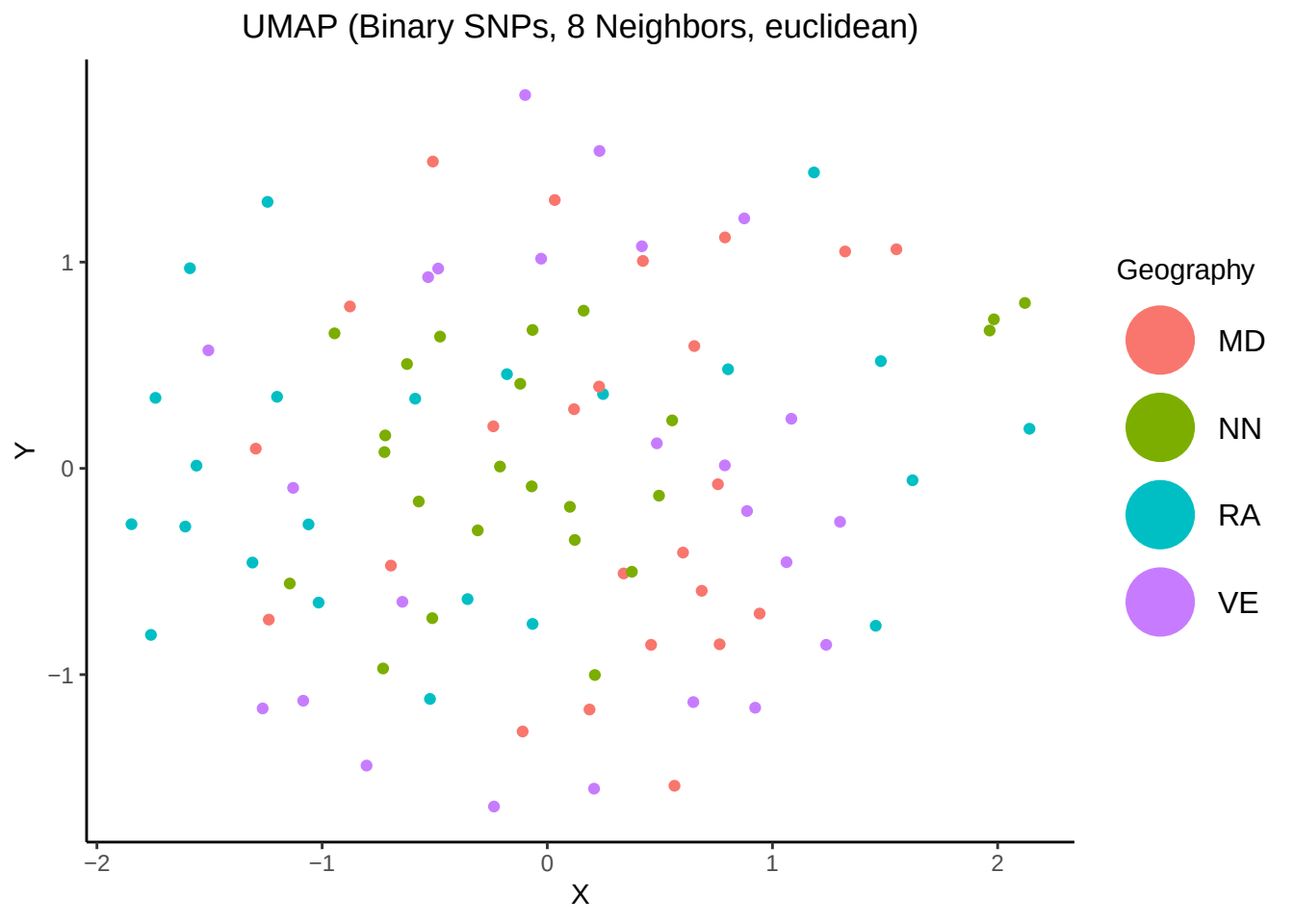
M


UMAP (Binary SNPs, 8 Neighbors, euclidean)
Y
X
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2
Geography
MD
NN
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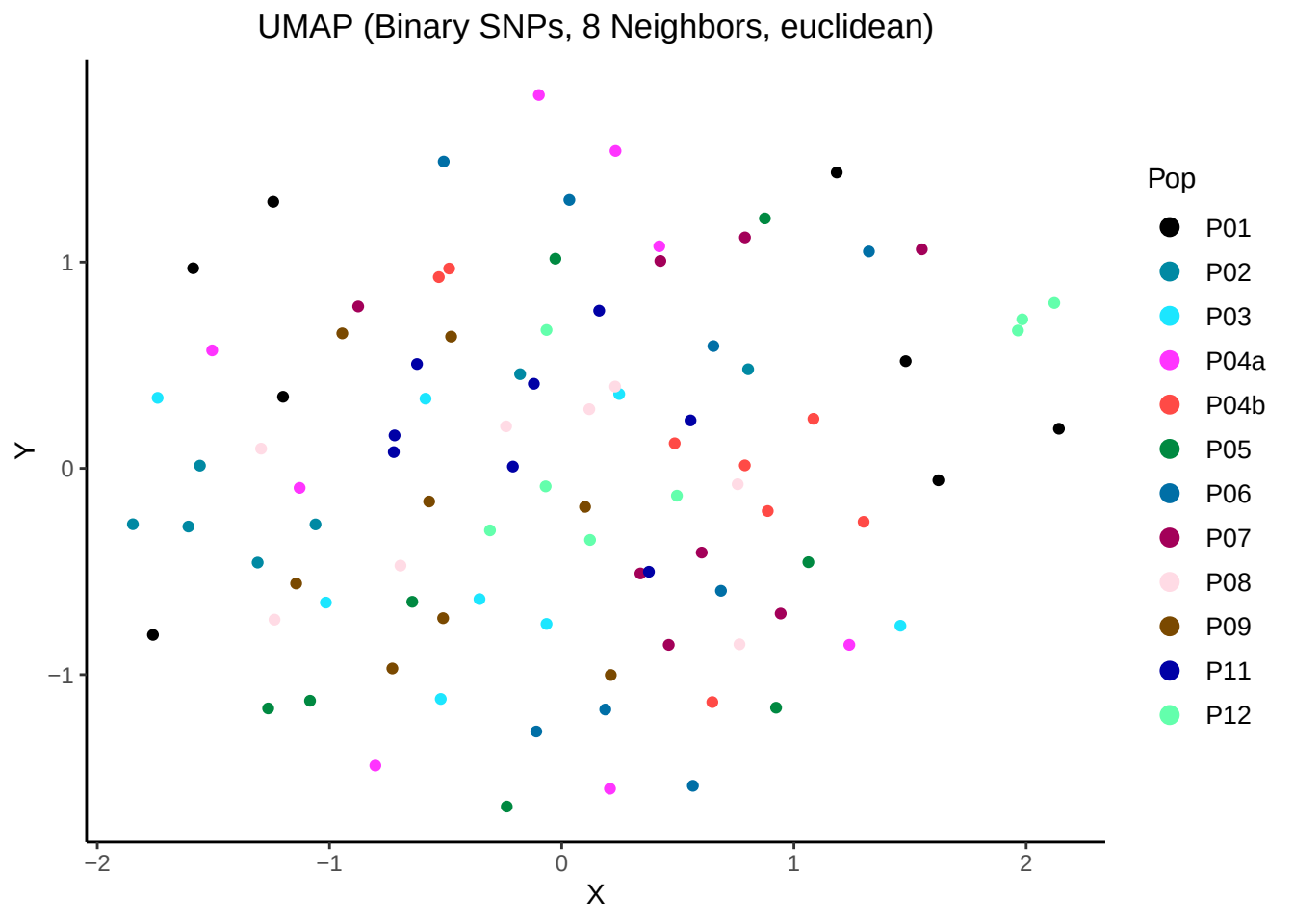
VE


UMAP (Binary SNPs, 8 Neighbors, euclidean)
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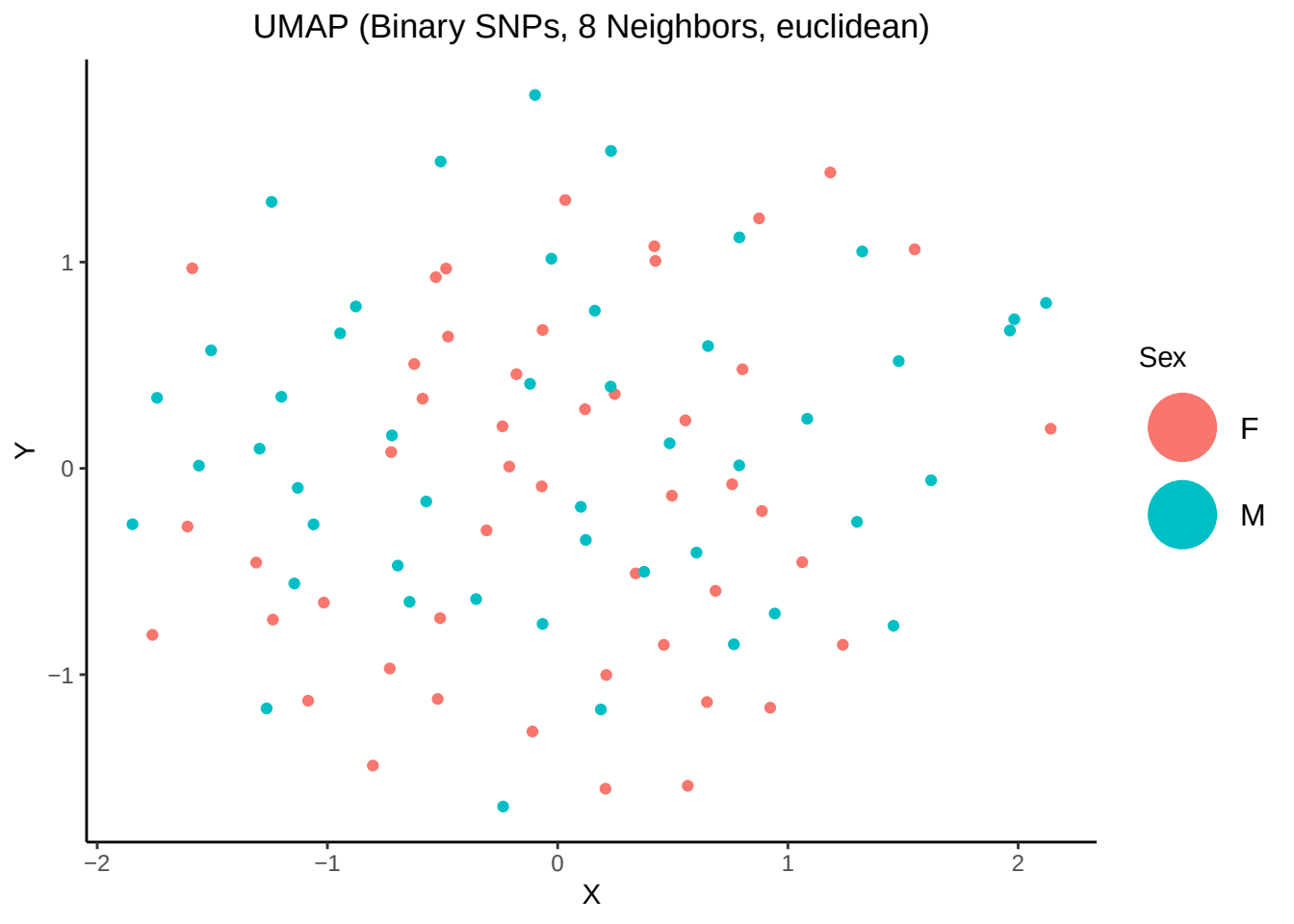
UMAP (Binary SNPs, 8 Neighbors, euclidean)
Y
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Sex
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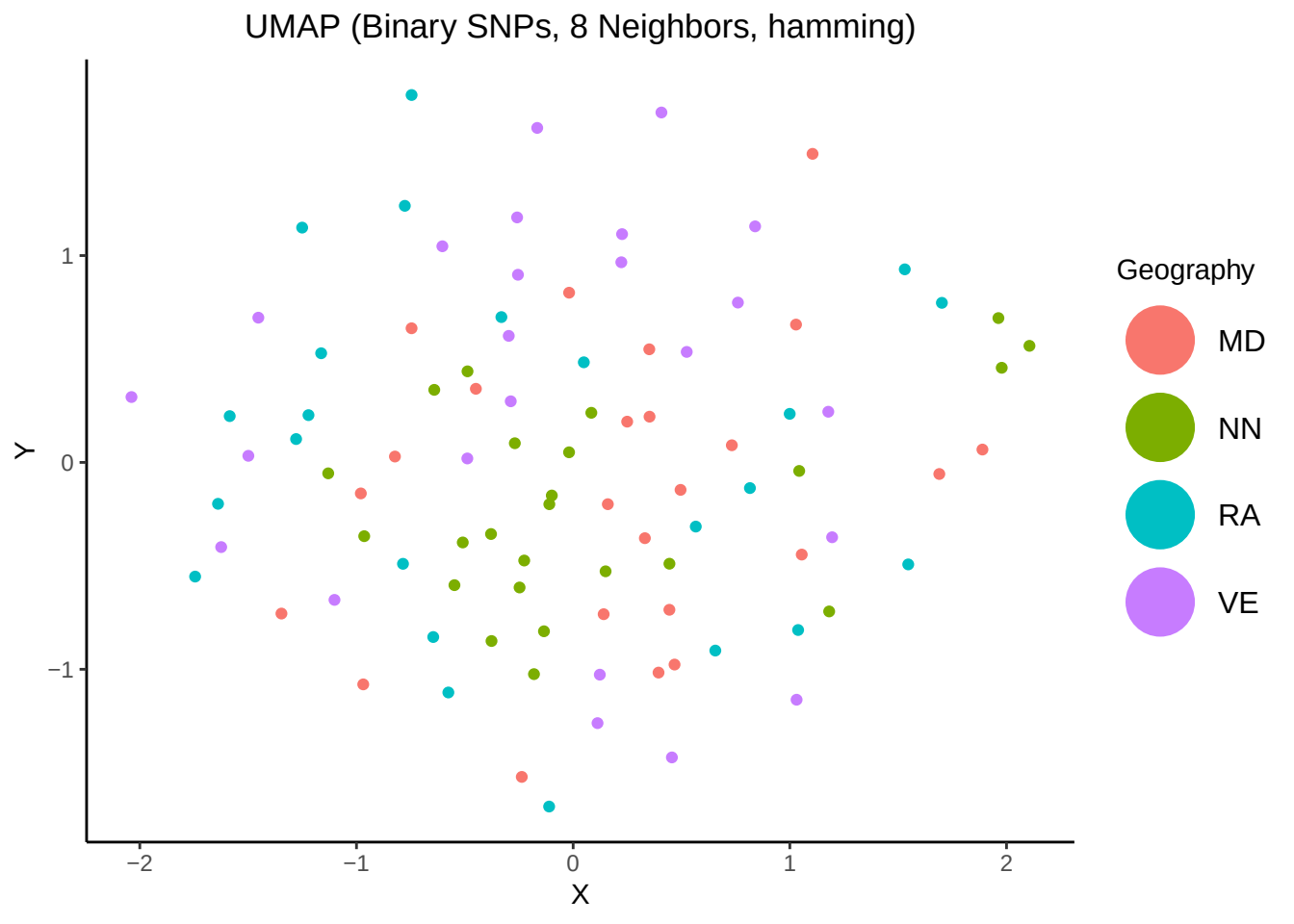
UMAP (Binary SNPs, 8 Neighbors, hamming)
Y
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Geography
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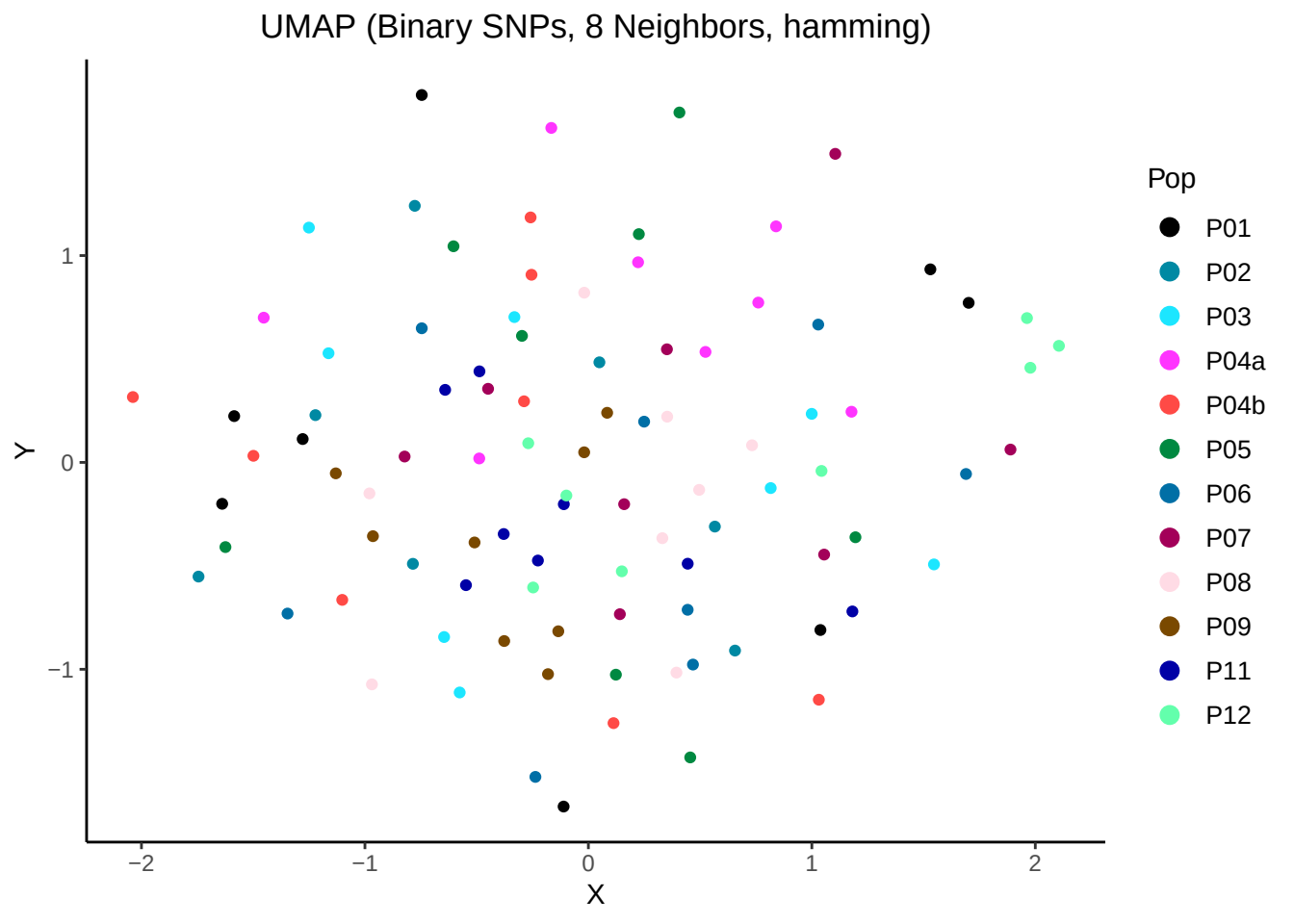
UMAP (Binary SNPs, 8 Neighbors, hamming)
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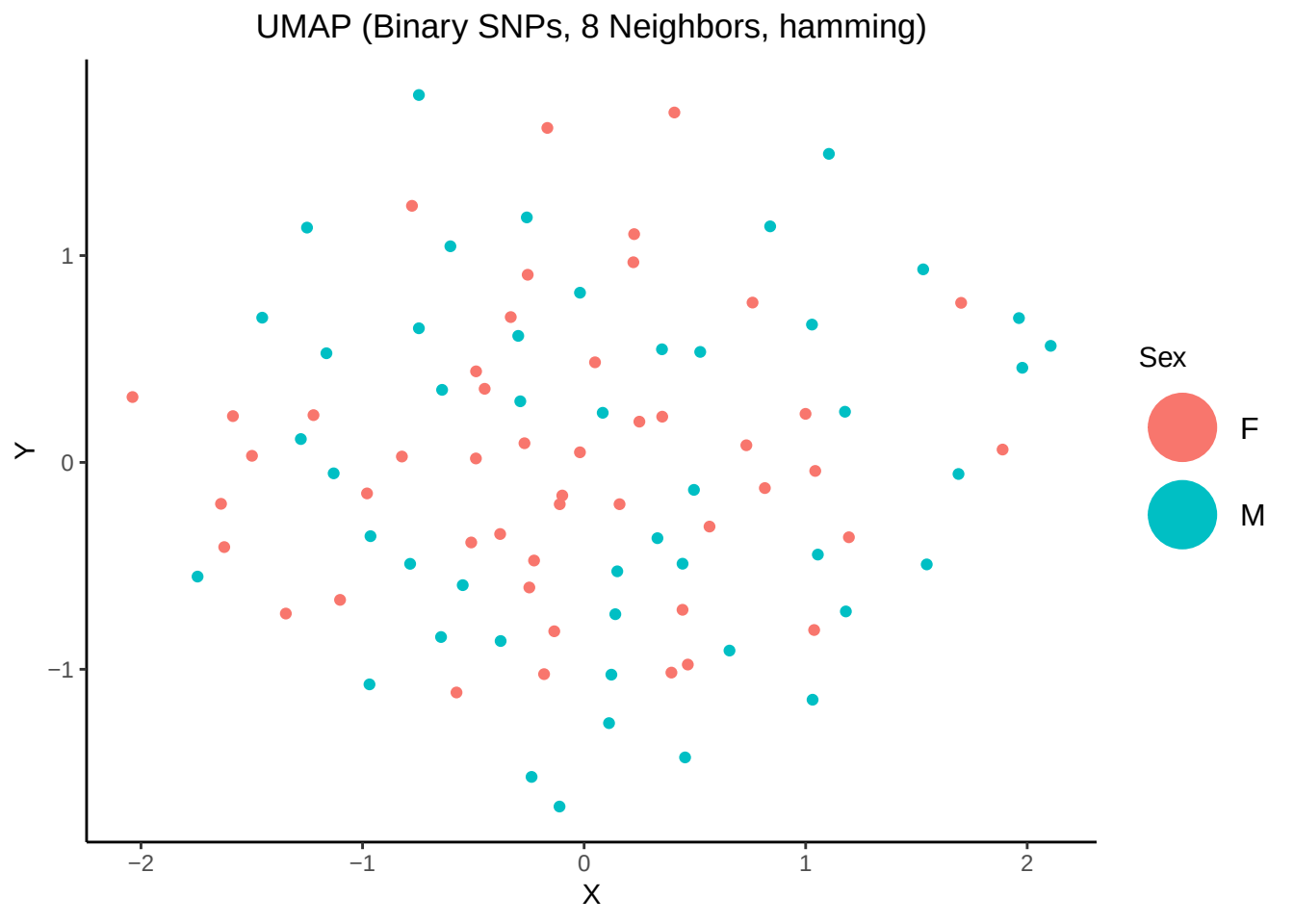
UMAP (Binary SNPs, 8 Neighbors, hamming)
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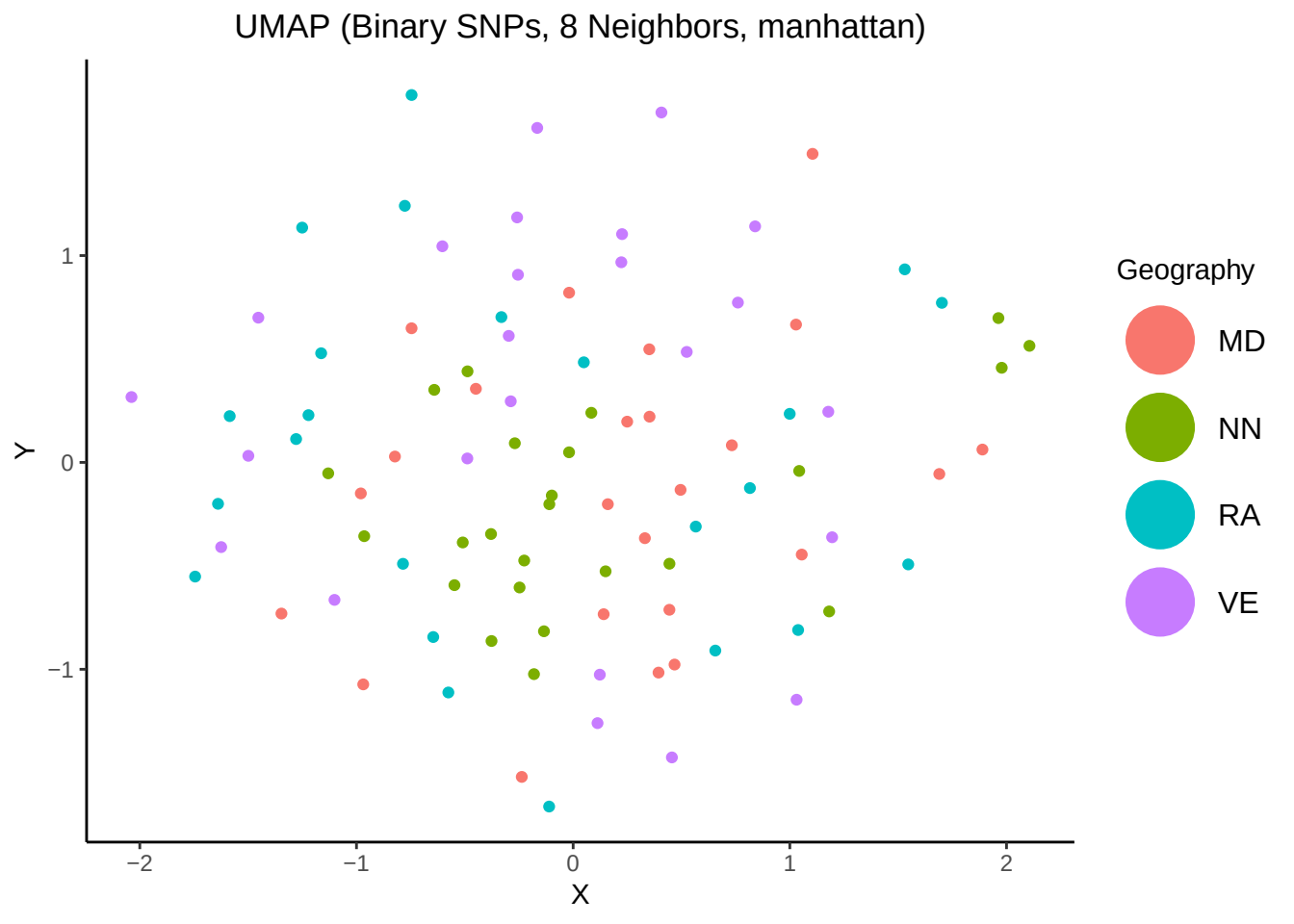
UMAP (Binary SNPs, 8 Neighbors, manhattan)
Y
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Geography
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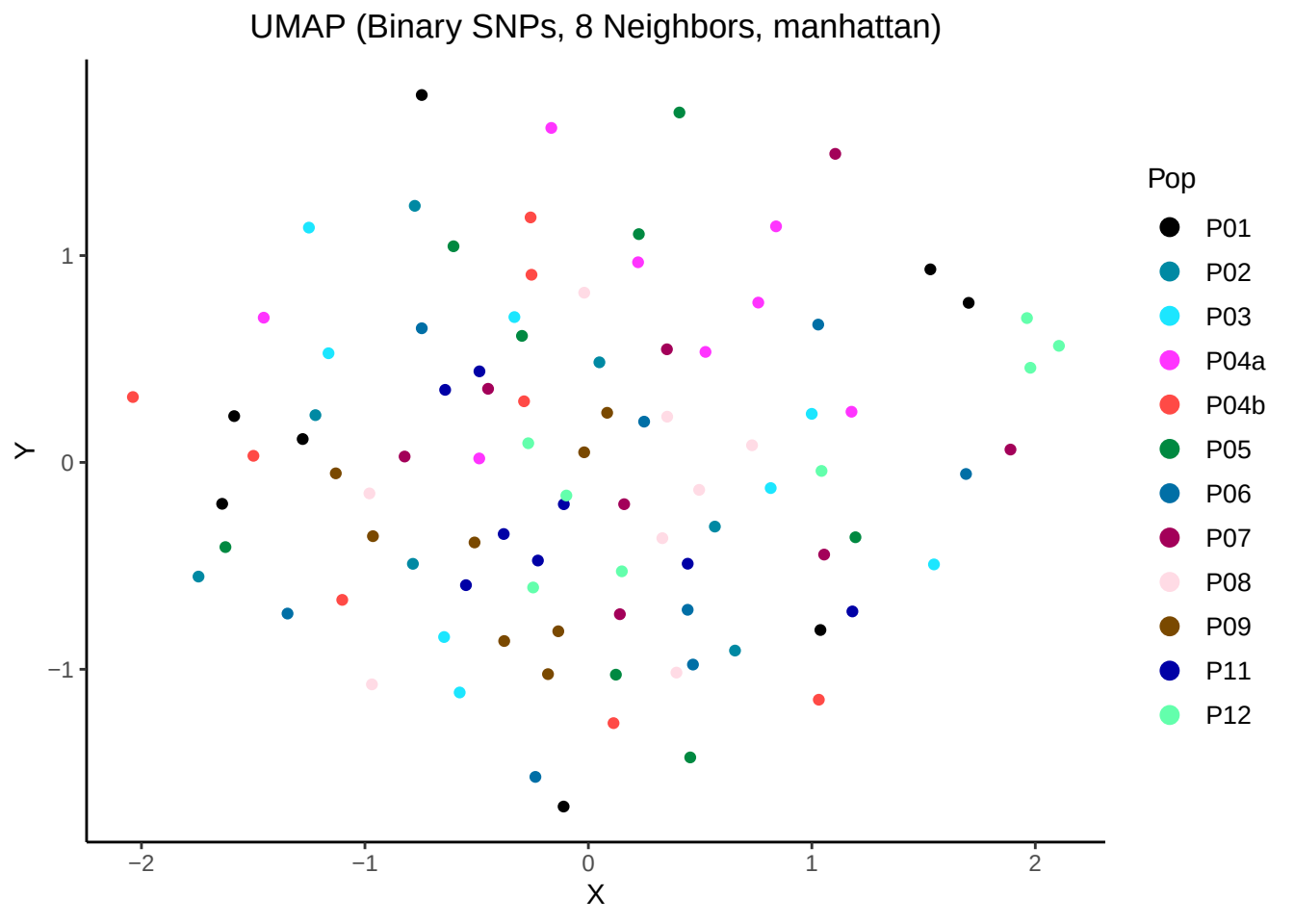
UMAP (Binary SNPs, 8 Neighbors, manhattan)
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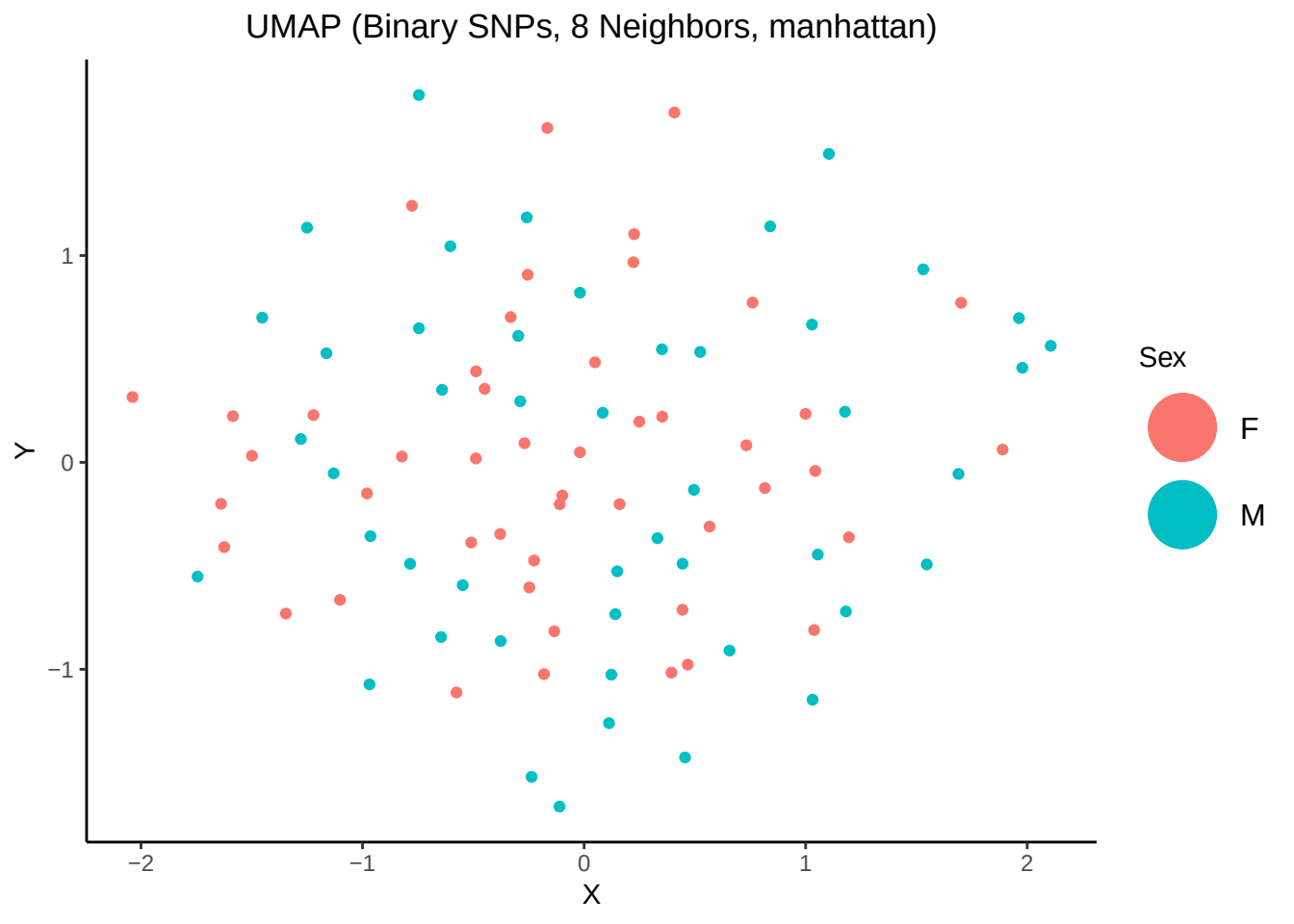
UMAP (Binary SNPs, 8 Neighbors, manhattan)
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Sex
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